DOCUMENT RESUME

ED 312 516 CG 022 012

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TITLE An Evaluation of the Senior Home Care Project.
INSTITUTION Massachusetts Univ. Medical Center, Worcester. Univ. Center on Aging.
PUB DATE Nov 88
NOTE 126p.; Submitted to Elder Home Care Services of Worcester Area, Inc.
PUB TYPE Reports - Evaluative/Feasibility (142) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC06 Plus Postage.
DESCRIPTORS Community Services; *Coordination; Health Services; Home Programs; Long Term Care; *Older Adults; *Program Effectiveness; *Program Evaluation

ABSTRACT

The Senior Home Care Program (SHCP) attempted to demonstrate the feasibility of integrating and coordinating medical, home health services, and home care for members of a senior health plan. It was designed to show how a state-supported home care system could work with health maintenance organizations to improve community-based long-term care. A quasi-experimental pre/post research design was carried out in which the clients in the SHCP (N=50) constituting the experimental group, were compared on a series of demographic, health, functional, psychological, social and health service variables with a matched group of elders (N=50) constituting the control group who were receiving services in a traditional manner. The results indicated that in terms of affecting the functional, mental/emotional, or social status of the clients, the experimental treatment had no effect. The two groups were extraordinarily alike at admission and at 3, 6, and 12 months later. The fact that the clinical team (the integrative case management unit) had virtually no effect on the physical, cognitive, and social status of the clients and their utilization of services raises a serious question concerning the lack of benefits of the SHCP as it was designed. However, the team effort did lead to greater understanding and knowledge among the team members about the functions, roles, and resources of the participating agencies. (ABL)

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AN EVALUATION OF

THE SENIOR HOME CARE PROJECT

Rosalie S. Wolf, Ph.D.

submitted to

Elder Home Care Services of Worcester Area, Inc.

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November, 1988

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ACKNOWLEDGEMENTS

This evaluation could not have been undertaken without the outstanding assistance of many individuals. I am especially grateful to Lois Green, Executive Director of Elder Home Care Services of Worcester Area, Inc., Eleanor Gilmartin, Director of Montachusett Home Care, and Bernard Gagnon, Director of Tri-Valley Elder Services, Inc. for their wholehearted support of this effort. I am also indebted to Dwaine Hartline, formerly with the Fallon Community Health Plan, and Ellen Leicher Sachs, Director of Planning and Research for the Fallon Community Health Plan whose interest and cooperation made this endeavor possible.

Deserving special mention is Molly O. Sullivan, Project Coordinator of the Senior Home Care Project, who not only supervised the collection of client assessment and service utilization data but who also gave generously of her time and skills for all phases of the evaluation. Carolyn Hussey, Health Care Manager for the Fallon Community Health Plan, was a strong advocate of the project from the beginning and instrumental in interpreting it to her staff. Invaluable help with data collection was provided by Mary Burke and Janice Fletcher of the Fallon Community Health Plan. Louis Swan, Assistant Director of Elder Home Care Services, supervised data gathering at Elder Home Care and merits my deep appreciation. To the members of the clinical teams, I want to express my gratitude for responding so graciously to my requests for information. I also wish to acknowledge Kathy Metzger and Mary Riley of the Worcester Area Systems for Affordable Health Care for their proficient handling of the client satisfaction and willingness to pay portion of the evaluation.

Lastly, I want to thank the Massachusetts Executive Office of Elder AFfairs and the demonstration grant program under the direction of Robert Mollica for the opportunity to carry out this project.

Rosalie S. Wolf
Evaluation Director

I. BACKGROUND

In late 1985, the Elder Home Care Services of Worcester Area, Inc. (EHC), the Fallon Community Health Plan (FCHP), and the Visiting Nurse Association of Central Massachusetts (VNA) initiated the Senior Home Care Program (SHCP) to demonstrate the feasibility of integrating and coordinating medical, home health services, and home care for Fallon Senior Plan (FSP) members in the Worcester community. It was one of several demonstration projects funded by the Massachusetts Executive Office of Elder Affairs to show how the state supported home care system could work with health maintenance organizations to improve community based long term care.

At the time that the project was undertaken, the FHCP had an enrollment of about 11,000 persons 65 years and older, making it the largest senior plan in the state and furthest along in development. In fact, its senior plan had been one of the seven Health Care Financing Administration's National Medicare Risk HMO Demonstrations; actually, the first to be implemented. A large majority of the senior members lived in central Worcester County, with much smaller numbers residing in towns both to the north and the south. Home health services for persons living in the central area were provided under a capitation contract with the VNA of Central Massachusetts; for those members located in other parts of the county, home health services were available on a fee-for-service contract with several agencies serving those specific locales. Decisions concerning the need and type of home health services were made by a Fallon health care coordinator who was responsible for seeing that the service plan conformed to the guidelines of the HMO plan.

The Massachusetts Executive Office of Elder Affairs (EOEA) supported three home care agencies in the county: EHC served the central part; Montachusett Home Care (MHC), the north county; and Tri-Valley Elder Services (TVS), the south county. Although each of these organizations offered a slightly different array of services, their primary focus and major activity was case management. When a person 60 years or over requested service, he or she was prescreened by an intake worker. If the client met basic eligibility guidelines regarding functional status, income, and informal supports, he or she was referred to a case manager.

Using a standard form called the Comprehensive Needs Assessment Procedure (CNAP), the case manager performed a detailed assessment of the client. Based on this evaluation, a plan of care was developed which had to be approved by the home care agency supervisor. Applicants who were determined to be ineligible were assisted by an information and referral specialist in finding another appropriate provider. Clients who were accepted were assigned a permanent case manager, who, in addition to developing the case plan, was responsible for initiation and monitoring of service delivery and periodic reassessment of client need. Clients were monitored by case managers until their case was closed due to death,

institutional placement, or lack of need for service.

The first year of the SHCP resulted in the formation of the organizational structure, completion of procedure guidelines and materials, implementation of a clinical team, creation of data files, and the admission of clients into the program. An advisory committee, project management committee and clinical team were responsible for developing and implementing the program policies and practices, assisted by the project coordinator, who managed the day-to-day operations. Because the SHCP was one of several similar demonstration projects established by Massachusetts Executive Office of Elder Affairs across the state, there was ongoing consultation and technical assistance from the Executive Office of Elder Affairs (EOEA).

The application to the EOEA for the second year of funding included further development of the Worcester model, and the design and implementation of two additional models, one for northern Worcester County in cooperation with the Montachusett Home Care Corporation (MHC) and a second for southern Worcester County in cooperation with the Tri-Valley Elder Services (TVS). It also included a plan to evaluate the effectiveness and cost of the SHCP, to be conducted by the University Center on Aging at the University of Massachusetts Medical Center. A multi-phase evaluation plan was proposed which would determine the impact of the SHCP on the client (in comparison with two control groups), utilization and cost of services, and informal caregivers; the client's satisfaction and willingness to pay for social services; and the effectiveness of the three organizational models.

After budget negotiations with the EOEA, three changes were made in the evaluation plan. The research questions related to the impact of the program on cost and caregivers were eliminated, one of the control groups was omitted, and data collection, except that which concerned the organizational models, became the responsibility of the SHCP staff.

II. METHODOLOGY

The final evaluation plan consisted of four questions:

A. What was the impact of the SHCP on the clients?

B. What was the impact of the SHCP on the utilization of health and social services?

C. How satisfied were the clients with the services and how much would the clients be willing to pay for coordinated health and social services?

D. How effective were the project models?

To answer the first three questions, a quasi-experimental pre/post

research design was carried out in which the clients in the SHCP (Experimental Group) were compared on a series of demographic, health, functional, psychological, social and health service variables with a matched group of elders (Control Group) who were receiving services from the FCHP and EHC in the traditional manner. The "experiment" was the utilization of a clinical team composed of a EHC case manager, FSP health care coordinator, VNA nurse and SHCP project coordinator to review the client assessment and reassessment data, develop the care plan, and monitor the client's progress. A more complete description of the functioning of the team can be found in section D.

Data Collection

The decision about the data to be collected was made jointly by EOEA and representatives of the demonstration projects. Sociodemographic, health, functional, psychological, social, health services, and satisfaction variables were included and were coded according to a procedure designed for another EOEA project. A SCHP staff member extracted and coded the data from the EHC assessment instrument (CNAP) (Exhibit 1), the EHC quarterly re-assessment forms (Exhibit 2), the EHC annual re-assessment (CNAP), and the Fallon medical records. Information on willingness to pay and client satisfaction was obtained by face-to-face interviews with the clients carried out by a graduate student from Clark University. All data were sent to the evaluation team for data processing and analysis.

Sample

The Experimental Group consisted of 50 members of the Fallon Senior Plan (FSP). Admission criteria included: residence in the EHC service area, eligibility for EHC services by reason of functional status; and social and medical "vulnerability" as determined by the health care coordinators (See Exhibit 3). The income requirement was waived. The Control Group was made up of 50 members of the Fallon Senior Plan who also happened to be active cases of EHC (unlike the Experimentals who were not EHC clients prior to admission to the SHCP), matched on a case-by-case basis with an Experimental Group member on sex, functional impairment level (FIL), and living arrangement (living alone/living with others.)

Based on the average number of persons admitted into the project during the summer of 1986, the sample plan was to include every person who had come into the SHCP between November 1, 1986 and April 1987. When the admissions were reviewed, it was found that there was an unusually high proportion of men. It was clear that trying to match a control group based on sex would be very difficult since the pool from which the comparison cases were to be drawn had an average proportion of men for that age cohort. Since November and January were months with unusually high male admissions, the sampling plan was altered to take every new admission into the SHCP for alternate months beginning in October of 1986 and continuing through June 1987. It was soon apparent that this particular arrangement would not yield 50 cases so the admission months were pushed back to June 1986 and extended through June 1987. For the

matching process, it was necessary to begin with January 1986. The last control case entered the sample in April, 1987.

In addition to the criteria for admission into the control group noted above, there was one other feature of the experimental group that could not be factored into the sampling plan. The latter had a recent encounter with the medical care system, which is how they were identified as a prospective SHCP case. To provide a comparable control group, it would have been necessary to admit the Fallon-EHC patients/clients into the control group at a time when they also had experienced an acute medical care problem, but that was not always possible because of the size of the control group pool and the need to match on the three variables.

Another problem was the fact that, for a portion of the control group sample, CNAP data could not be used since the initial assessment did not necessarily coincide with the beginning date of the six month data collection period. In these instances, the quarterly re-assessment form closest to the time of admission into the study was substituted (called the short form) for the initial assessment (CNAP). Because it only contained functional status variables, information on health, social and psychological items is missing on a portion of the control group sample. Table 1 presents the number of clients in the sample at the various stages of assessment.

Analyses

The chi-square statistic was used to determine significant differences between the Experimental and Control Groups for nominal and ordinal data at admission into the study and 3, 6, and 12 months later with significance set at the $p<.05$ level. The rating for certain variables was converted to numerical scores and these were compared for the two groups using the t-test. Likewise, the latter was used to analyze all utilization data. Another set of analyses featured a comparison of the amount of change in function that the Experimental and Control clients had shown at the above points in time. Because of the small number of cases, the lack of discordant pairs, and missing data, a decision was made to break the match and compare one group with another.

III. RESULTS

Referral and Length of Stay

According to Table 2, there was some variation in the reasons for referral between the Experimental and Control groups, but not quite enough to be considered statistically different at the $p<.05$ level. Four of the 50 Experimental clients were recovering from an illness or accident, 14 were discharged from the hospital, 12 referrals were attributed to the needs of the caregivers, and 20 were assigned to a variety of other reasons. None of the Control Group members were recovering from an illness/accident, but 24 were referred because of a hospital discharge, 12

TABLE 1 NUMBER OF CASES FOR EACH PHASE OF DATA COLLECTION

	Experimental	Control
Admission Assessment		
Long-Form	50	22
Short-Form	-	28
3 Month Reassessment	37	39
6 Month Reassessment	27	32
9 Month Reassessment	0	6
Satisfaction/Willingness to Pay	32	23
Services Utilization	50	50

TABLE 2 REFERRAL SOURCE, REASON FOR REFERRAL, LENGTH OF STAY AND REASON FOR EXIT OF THE EXPERIMENTAL AND CONTROL GROUP MEMBERS

	Experimental n=50	Control n=50
	# %	# %
a) Reason for Referral		
Recovering from illness/accident	4 (8.0)	-
Caregiver needs help	12 (24.0)	12 (24.0)
Hospital discharge	14 (28.0)	24 (48.0)
Other	20 (40.0)	14 (28.0)
p=.0529		
b) Referral Source		
Fallon Community Health Plan	14 (28.0)	11 (22.0)
Visiting nurse	11 (22.0)	7 (14.0)
St Vincent Hospital	1 (2.0)	11 (22.0)
Doctor	7 (14.0)	12 (24.0)
Family member	-	1 (2.0)
Hospital discharge	4 (8.0)	2 (4.0)
Other	13 (26.0)	6 (12.0)
p=.0192		
c) Reason for exit		
Client institutionalized	-	9 (18.0)
Death	6 (12.0)	1 (2.0)
Voluntary disenrollment	4 (8.0)	-
Condition improved	5 (10.0)	-
Other	1 (2.0)	1 (2.0)
Study ended	34 (68.0)	39 (78.0)
p=.0005		
d) Length of Stay in Study (mean days)	147.64	166.60
p=.0531		

because of the needs of the caregiver, and 14 for other reasons.

The pattern of referral sources (the Fallon Community Health Plan, St. Vincent Hospital, doctor, family member, visiting nurse, hospital discharge and others) did vary between the two groups (p=.0192), especially in the importance of St. Vincent Hospital, which accounted for only 1 of the Experimental client referrals, but for 11 of the Control Group. Eleven members of the Experimental Group were referred by the visiting nurse compared to 7 for the Control Group. Seven of the Experimental and 12 of the Control referrals came from physicians.

The two groups also differed on the reason why they left the study (p=.0005). Six of the Experimental Group clients died compared to 1 of the Control group; 9 of the Control Group were institutionalized, but none of the Experimental clients. The Experimental Group also had 5 members who withdrew from the study voluntarily, and 4 whose condition improved. Both groups had 1 exit attributed to "other" reason. Thirty four clients from the Experimental Group and thirty-nine from the Control Group were in the study for the six month period. The actual mean length of stay for the 50 Experimental Group members was 147.64 days; for the Control Group members, it was 166.60, a difference that was not quite statistically significant (p=.0531).

A. IMPACT OF THE SENIOR HOME CARE PROGRAM ON THE CLIENTS

Client Status at Admission

Sociodemographic Characteristics

The purpose of the first cross-tabulations was to determine the degree of similarity between the Experimental and Control group members at admission. As noted earlier, the two samples were matched on sex, living arrangements, and FIL level. Table 3 shows that each group consisted of 15 males and 35 females. Thirty-two of the Experimental Group lived with a spouse, 1 with spouse and other family member, 7 with a family member, not a spouse, and 1 with non-family member. The living arrangements of the Control Group included 31 individuals who lived alone, 10 with spouse, 2 with spouse and other family members, 5 with a family member not a spouse, 1 with both a family and non-family member. Although the frequency distributions were not exactly alike, statistically they were the same (p=.8844).

Likewise, the marital status of the two groups were not statistically different, although there were some variations: 2 Experimental Group clients were single; 10, married; 35, widowed; and 3, divorced. Of the Control Group clients, 4 were single; 12, married; 30, widowed; and 4, divorced. Age-wise the groups were almost identical. The average age of the 50 persons in the Experimental Group was 80.24 years and of those in the Control Group, 79.96 years.

When the financial situation of the two groups were compared, there

TABLE 3 AGE, SEX, MARITAL STATUS, LIVING ARRANGEMENT, AND FINANCIAL SITUATION OF THE EXPERIMENTAL AND CONTROL GROUP MEMBERS AT THE TIME OF ADMISSION INTO THE STUDY

	Experimental n=50	Control n=50
	# %	# %
a) Age (mean years)	80.24	79.96
b) Sex		
Male	15 (30.0)	15 (30.0)
Female	35 (70.0)	35 (70.0)
p=1.000		
c) Marital Status		
Single	2 (4.0)	4 (8.0)
Married	10 (20.0)	12 (24.0)
Widowed	35 (70.0)	30 (60.0)
Divorced	3 (6.0)	4 (8.0)
Separated	-	-
p=.7112		
d) Living Arrangements		
Alone	32 (64.0)	31 (62.0)
Spouse	9 (18.0)	10 (20.0)
Spouse and family member(s)	1 (2.0)	2 (4.0)
Family member(s)	7 (14.0)	5 (10.0)
Non-family member(s)	1 (2.0)	1 (2.0)
Family and non-family member(s)	-	1 (2.0)
p=.8844		
e) Financial Situation		
Income eligible for home care	26 (52.0)	37 (74.0)
AB	1 (2.0)	-
Sliding fee	14 (28.0)	13 (26.0)
Over income	9 (18.0)	-
p=.0075		

were clear differences (p=.0075). Over half, (26) of the Experimental Group were financially eligible for EHC services compared to three-quarters (37) of the Control Group. The former also included 9 persons who were over-income for EHC services, but who became entitled to them as part of the SHCP project.

Health Status at Admission

Health status was determined in three ways: the first was a self-report of current health status by the elderly participants and then a comparison with that of the previous year; the second requested the last date of hospitalization (extracted from the Fallon Clinic records); and the third was a tally of 14 medical conditions. Since these items appeared on the long-form questionnaire (CNAP), those Control Group members (n=27) whose admission data came from the quarterly re-assessments rather than the CNAP tool were not included in these results. A comparison of the two client groups with regard to their self-reported health status revealed no significant difference. Among the Experimental Group members, 10 said that their health was good; 29, fair; and 10, poor. The corresponding numbers for the Control Group are 6, good; 11, fair; and 3, poor. Although 1 member of the Experimental Group said that his/her health was better than last year, 13 said that it was the same and 35, worse. Nine of the Control group (n=20) reported that their health was the same and 11, over half, reported it was worse.

The average number of days since the last hospitalization for the Experimental Group was 1,319 (range: 0-5475) compared to 770 (range: 0-4138) for the Control Group which was not a statistical difference. For about 4 out of 5 members of each group, hospitalization had occurred within the year. When the logarithms of the numbers were used for the chi-square analysis, the difference was significant with the larger value (more days) attributed to the Control Group (Table 4) (p=.0015).

As Table 5 indicates, the proportion of the two groups suffering from the various diseases/conditions was statistically the same. The most prevalent health problem was heart and circulatory disease, with almost three-quarters (36) of the Experimental Group (50) having this problem and more than four-fifths (18) of the Control Group (22). Arthritis was the second most prevalent condition: over one-third (18) of the Experimental Group were found to have arthritis and over one half (13) of the Control Group. Next, in decreasing order for the Experimental Group was Alteration in Nutritional Status and Diseases of the Eye; for the Control Group, it was Diseases of the Eye and Alteration in Nutritional Status.

Functional Status at Admission

The measures of functional status included the Functional Impairment Level (FIL) derived by the case manager after carrying out the client assessment (CNAP), and the ratings also conducted by the case manager on the ability of the client to carrying out a series of activities [Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL)]. The two groups of participants were compared on the

TABLE 4 HEALTH INDICATORS OF THE EXPERIMENTAL AND CONTROL GROUP MEMBERS AT THE TIME OF ADMISSION INTO THE STUDY

	Experimental n=49	Control n=20
	# %	# %
a) Self-Rated Health		
Excellent	-	-
Good	10 (20.4)	6 (30.0)
Fair	29 (59.2)	11 (55.0)
Poor	10 (20.4)	3 (15.0)
p=.6614		
b) Health Compared to Last Year		
Better	1 (2.0)	-
Same	13 (26.5)	9 (45.0)
Worse	35 (71.4)	11 (55.0)
p=.2861		
c) Days Since Last Hospital Stay	1319	770
p=.4322		
d) Months/Years Since Last Hospital Stay	n=38	n=18
1 month or less	19 (50.0)	6 (33.3)
More than 1 month, less than 1 year	11 (28.9)	9 (50.0)
More than 1 year, less than 2	16 (2.6)	-
More than 2 years	7 (18.4)	3 (16.7)
e) Days (log) Since Last Hospital Stay	1.317	1.595
p=.0015		

TABLE 5 MEDICAL CONDITIONS OF THE EXPERIMENTAL AND CONTROL GROUP MEMBERS AT THE TIME OF ADMISSION INTO THE STUDY

	Experimental n=50		Control n=22		Significance*
	#	%	#	%	
Heart and Circulatory Problems	36	(72.0)	18	(81.8)	
Arthritis	18	(36.0)	13	(59.1)	
Alteration in Nutritional Status	16	(32.0)	4	(18.2)	
Diseases of the Eye	12	(24.0)	8	(36.4)	
Fractures	11	(22.0)	4	(18.2)	
Diseases of the Musculo-Skeletal System	11	(22.0)	4	(19.0)	
Diabetes	10	(20.0)	4	(18.2)	
Respiratory Conditions	9	(18.4)	5	(22.7)	
Cancer	6	(12.0)	2	(9.1)	
Diseases of the Digestive System	6	(12.0)	3	(13.6)	
Alteration in Skin Integrity	4	(8.0)	1	(4.5)	
Alzheimer's Disease and Related Disorders	3	(6.1)	3	(13.6)	
Diseases of the Nervous System	2	(4.0)	3	(13.6)	
Diseases of the Genito-Urinary System	2	(4.0)	1	(4.5)	
Other Problems	5	(10.0)	6	(27.3)	

*Chi-square and Fisher's exact test analysis indicated no significant differences for any of the above conditions at $p < .05$.

individual scores as well as a total ADL and IADL scores. Since the information on functional status was on the quarterly assessment forms, all 50 Control Group members were part of the analyses.

The Experimental Group included 8 clients at Level 1; 12, Level 2; 19, Level 3; 11, Level 4 and none at Level 5. The comparison figures for the Control Group were 9, Level 1; 12, Level 2; 17, Level 3; 10, Level 4; and 1, Level 5. When the two groups were compared on the individual ADLs as well as the total ADL score, there were no significant differences in the two groups of clients. The overall ADL score mean for the Experimental Group was 5.69 and for the Control Group, 5.98. In scoring functional status, the values for the levels of ability were 0, completely able; 1, able with aids/difficulty; 2, able with helper; and 3, completely unable. Since there were 8 activities, the range of scores was 0-24. The rating of almost 6 for the two groups meant that on average, the majority functioned with aids or with difficulty (Table 6).

There were some differences in the IADL scores of the two groups, most markedly for transportation (p=.0000). Thirty-six of the 50 individuals in the Experimental Group could manage transportation without help and 14, needed some help compared to the Control Group, 8 of whom could manage without help and 29 with some help, but 19 couldn't manage at all. There were two other instrumental activities whose p values were just over .05: money management (p=.0501) and taking medication (p=.0544). Twenty-five of the Experimental Group could manage money matters without help, 21 with some help and 4 couldn't do it at all whereas 20 of the Control Group needed no help; 16 with some help; and 13 could not manage at all. There were 34 among the 50 Experimental Group members who did not require assistance in taking medication and 16 who needed some help in contrast to 27 of the Control Group who could handle their medications without help; 17 who needed some assistance; and 5 who could not manage them alone.

The mean total of the 9 IADL scores was 8.02 for the Experimental Group and 10.41 for the Control Group, a difference that was significant at p=.0129. The scoring system included 0, without help; 1, with some help; and 2, can't do it at all. The range for the 9 activities was 0-18. Thus, with a score of 8.02, on average almost all of Experimental Group needed some help with their IADLs, whereas the Control Group had several members who could not perform the activities at all, raising the dependency level of the group as a whole (Table 7).

Mental/Emotional Status at Admission

Three variables on the CNAP instrument were used to assess the mental and emotional status of the older person: the client appears oriented to time, place and person; the client appears agitated; and the client appears depressed, each rated yes, no, or sometimes. None of the comparisons between the Experimental and Control were significantly different. For a large majority of the groups, there appeared to be no problem with orientation, agitation or depression. A comparison of a composite score based on the responses to the three questions (Yes=1, No=0) also showed no significant difference in the two groups. Thirty-

TABLE 6 ASSESSMENT OF FUNCTIONAL (ADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS AT THE TIME OF ADMISSION INTO THE STUDY

	Experimental n=50		Control n=50	
	#	%	#	%
a) Functional Impairment Level (FIL)				
Level 1	8	(16.0)	9	(18.4)
Level 2	12	(24.0)	12	(24.5)
Level 3	19	(38.0)	17	(34.7)
Level 4	11	(22.0)	10	(20.4)
Level 5	-		1	(2.0)
b) Bathing				
Completely able	8	(16.0)	13	(26.0)
Able with aids/difficulty	10	(20.0)	10	(20.0)
Able with helper	31	(62.0)	25	(50.0)
Completely unable	1	(2.0)	2	(4.0)
p=.5385				
c) Dressing				
Completely able	22	(44.0)	21	(42.0)
Able with aids/difficulty	13	(26.0)	13	(26.0)
Able with helper	15	(30.0)	13	(26.0)
Completely unable	-		3	(6.0)
p=.3667				
d) Eating				
Completely able	42	(84.0)	39	(78.0)
Able with aids/difficulty	2	(4.0)	7	(14.0)
Able with helper	6	(12.0)	3	(6.0)
Completely unable	-		1	(2.0)
p=.1801				
e) Toileting				
Completely able	35	(70.0)	30	(60.0)
Able with aids/difficulty	8	(16.0)	12	(24.0)
Able with helper	7	(14.0)	6	(12.0)
Completely unable	-		2	(4.0)
p=.3530				

TABLE 6 ASSESSMENT OF FUNCTIONAL (ADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS AT THE TIME OF ADMISSION INTO THE STUDY (cont.)

	Experimental n=50		Control n=50	
	#	%	#	%
f) Bladder Control				
Completely able	37	(74.0)	30	(60.0)
Able with aids/difficulty	3	(6.0)	2	(4.0)
Able with helper	6	(12.0)	16	(32.0)
Completely unable	4	(8.0)	2	(4.0)
p=.1048				
g) Bowel Control				
Completely able	44	(88.0)	38	(76.0)
Able with aids/difficulty	3	(6.0)	3	(6.0)
Able with helper	3	(6.0)	8	(16.0)
Completely unable	-		1	(2.0)
p=.2943				
h) Transfer from Bed/Chair				
Completely able	15	(30.0)	20	(40.0)
Able with aids/difficulty	26	(52.0)	23	(46.0)
Able with helper	9	(18.0)	6	(12.0)
Completely unable	-		1	(2.0)
p=.4757				
i) Get Around Inside				
Completely able	18	(36.0)	17	(34.0)
Able with aids/difficulty	29	(58.0)	27	(54.0)
Able with helper	2	(4.0)	6	(12.0)
Completely unable	1	(2.0)	-	
p=.3765				
j) Total ADL Score (mean)	5.40		5.98	
p=.5323				

TABLE 7 ASSESSMENT OF FUNCTIONAL (IADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS AT THE TIME OF ADMISSION INTO THE STUDY

	Experimental n=50		Control n=50	
	#	%	#	%
a) Meal Preparation				
Without help	7	(14.0)	5	(10.0)
With some help	27	(54.0)	28	(56.0)
Can't do it at all	16	(32.0)	17	(34.0)
p=.8262				
b) Housework				
Without help	2	(4.0)	2	(4.0)
With some help	22	(44.0)	22	(44.0)
Can't do it at all	26	(52.0)	26	(52.0)
p=1.0000				
c) Laundry				
Without help	3	(6.0)	2	(4.0)
With some help	19	(38.0)	19	(38.0)
Can't do it at all	28	(56.0)	29	(58.0)
p=.8969				
d) Shopping				
Without help	-		3	(6.0)
With some help	16	(32.0)	11	(22.0)
Can't do it at all	34	(68.0)	36	(72.0)
p=.1365				
e) Taking Medications				
Without help	34	(68.0)	27	(55.1)
With some help	16	(32.0)	17	(34.7)
Can't do it at all	-		5	(10.2)
p=.0544				

TABLE 7 ASSESSMENT OF FUNCTIONAL (IADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS AT THE TIME OF ADMISSION INTO THE STUDY (cont.)

	Experimental n=50		Control n=50	
	#	%	#	%
f) Getting Around Outside				
Without help	11	(22.0)	13	(26.5)
With some help	35	(70.0)	29	(59.2)
Can't do it at all	4	(8.0)	7	(14.3)
p=.4636				
g) Transportation				
Without help	36	(72.0)	8	(16.3)
With some help	14	(28.0)	29	(59.2)
Can't do it at all	-		12	(24.5)
p=.0000				
h) Money Management				
Without help	25	(50.0)	20	(40.8)
With some help	21	(42.0)	16	(32.7)
Can't do it at all	4	(8.0)	13	(26.5)
p=.0501				
i) Uses Telephone				
Without help	44	(88.0)	39	(79.6)
With some help	5	(10.0)	6	(12.2)
Can't do it at all	1	(2.0)	4	(8.2)
p=.3358				
j) Total IADL Score (mean)	8.02		10.41	
p=.0129				

TABLE 8 ASSESSMENT OF THE MENTAL/EMOTIONAL STATUS OF THE EXPERIMENTAL AND CONTROL GROUP MEMBERS AT THE TIME OF ADMISSION INTO THE STUDY

	Experimental n=50		Control n=23	
	#	%	#	%
a) Client Appears Oriented to Time, Place and Person				
Yes	44	(88.0)	21	(91.3)
No	3	(6.0)	2	(8.7)
Sometimes	3	(6.0)	-	
p=.4569				
b) Client Appears Agitated				
Yes	2	(4.0)	1	(4.3)
No	48	(96.0)	22	(95.7)
Sometimes	-		-	
p=.9446				
c) Client Appears Depressed				
Yes	7	(14.0)	2	(8.7)
No	43	(86.0)	21	(91.3)
Sometimes	-		-	
p=.5219				
d) Mental/Emotional Status Score				
No problem	38	(76.0)	20	(87.0)
Problem in 1 sphere	10	(20.0)	2	(8.7)
Problem in 2 spheres	1	(2.0)	-	
Problem in 3 spheres	1	(2.0)	1	(4.3)
p=.5242				

eight of the 50 Experimental clients and 20 of the 23 Control clients were problem-free in the three specified areas (Table 8).

Socialization Status at Admission

Five questions on the CNAP instrument furnished information about the socialization status of the study participants. Again, these questions only appeared on the long-form (CNAP). Consequently, only those clients whose admission data was taken from a short-form (quarterly reassessment) are in these analyses. According to the results, most of the Experimental Group (48) and the Control Group (21) had daily contact, with each group displaying a different pattern of responses for "lives with others," "visits," "telephones," and combinations thereof. Even so, there was no statistical difference in the two groups. However, the Experimental Group members' answer to the question of who were the client's contacts was significantly different from those of the Control Group ($p=.0424$). Three of the 42 Experimental Group members answered "spouse"; 5, children; 18, family members; 4, friends; 11, family and friends; and 1, other. Data were only available on 18 of the 23 Control Group members, 2 of whom had contact with a spouse; 1, with children; 5, family members; 3, friends; 2, family and friends; and 5, other contacts.

Contact with outside organizations was more limited. About one quarter of the Experimental Group (12) and Control Group (5) responded positively, results which were not significantly different. Similarly, the two groups were alike in their level of socialization. Forty of the 50 Experimental Group and 19 of the 21 Control Group members said that they were satisfied with their level of socialization (Table 9).

The comparability of the two groups was again evident in the answers to several questions designed to assess the vulnerability of the caregiver. Since responses were available only for those clients with caregivers, the sample size on these items was small. The comparison involved 25 of the 49 Experimental clients and 9 of the 23 Control clients for whom CNAP data was available. The "willingness" of a large majority of the caregivers of both client groups was rated as high, 22 of the Experimental Group and 8 of the Control Group, but 17 of the Experimental Group caregivers and 4 of the Control Group caregivers were assessed to be experiencing stress. Also, 10 of the Experimental caregivers and 5 of the Control caregivers were viewed as needing relief. A caregiver burden score was created by combining the responses to the "stress" and "relief" questions (yes=1, no=2). It too showed the similarity of the two groups, with about 10 of the Experimental caregivers and 4 of the Control Caregivers rated as having moderate to high burdens. (Table 10).

In summary, at admission, the two groups were remarkably the same, with regard to sociodemographic characteristics, health indicators, functional and mental status, and level of socialization. Only two factors and a possible third differentiated the groups. The Experimental Group included more members above the financial threshold for receiving EHC services. They were also probably better able to manage transportation and money matters. The next stage in the analysis was to

TABLE 9 ASSESSMENT OF SOCIALIZATION OF EXPERIMENTAL AND CONTROL GROUP MEMBERS AT THE TIME OF ADMISSION INTO THE STUDY

	Experimental n=50	Control n=23
	# %	# %
a) Client Has Daily Contact		
Yes	48 (96.0)	21 (91.3)
No	2 (4.0)	2 (8.7)
p=.4148		
b) Type of Contact (yes responses)	n=29	n=15
Visits	10 (25.6)	2 (13.3)
Telephone	8 (20.5)	6 (40.0)
Visits and telephone contact	15 (38.5)	3 (20.0)
Lives with other(s)	4 (10.3)	4 (26.7)
Lives with others and visits	1 (2.6)	-
Lives with others and telephone contact	-	-
Lives with others, visits and telephone contact	1 (2.6)	-
p=.2899		
c) Who are the client's contacts?	n=42	n=18
Spouse	3 (7.1)	2 (11.1)
Children	5 (11.9)	1 (5.6)
Family members	18 (42.9)	5 (27.8)
Friends	4 (9.5)	3 (16.7)
Family and Friends	11 (26.2)	2 (11.1)
Other	1 (2.4)	5 (27.8)
p=.0424		
d) Contact With Groups/Organizations	n=50	n=19
Yes	12 (24.0)	5 (26.3)
No	38 (76.0)	14 (73.7)
p=.8410		
e) Satisfied With Level of Socialization	n=49	n=21
Yes	40 (81.6)	19 (90.5)
No	9 (18.4)	2 (9.5)
p=.3515		

TABLE 10 ASSESSMENT OF VULNERABILITY OF CAREGIVERS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS AT THE TIME OF ADMISSION INTO THE STUDY

	Experimental	Control
	# %	# %
a) Client Has Caregiver	n=49	n=23
Yes	25 (51.0)	9 (39.0)
No	24 (49.0)	14 (60.9)
p=.3461		
b) Location of Caregiver	n=24	n=9
In household	16 (66.7)	7 (77.8)
In same building	3 (12.5)	1 (11.1)
In other location	5 (20.8)	1 (11.1)
p=.7919		
c) Willingness of Caregiver	n=24	n=9
High	22 (91.7)	8 (88.9)
Moderate	2 (8.3)	1 (11.1)
Low	-	-
p=.8047		
d) Caregiver Experiences Stress	n=24	n=9
Yes	7 (29.2)	5 (55.6)
No	17 (70.8)	4 (44.4)
p=.1605		
e) Caregiver Needs Relief	n=24	n=9
Yes	10 (41.7)	5 (55.6)
No	14 (58.3)	4 (44.4)
p=.1693		
f) Caregiver Burden Score	n=24	n=9
High	6 (25.0)	5 (33.3)
Moderate	1 (67.6)	1 (11.1)
Low	14 (58.3)	5 (55.6)
p=.2515		

examine the functional status of the two groups three months after admission to determine whether there had been any changes in their functioning.

Client Status Three Months After Admission

The quarterly reassessment form utilized by EHC to monitor the functional status of their clients provided data for the Experimental and Control Group members three months after admission into the study. For this set of analyses, there were 37 clients in the Experimental Group and 39 in the Control group. Comparable to the finding at admission, the groups showed no difference in FILs although the Experimental has more Level 4 members (12) compared to the Control Group (8) whereas the Control Group has more Level 3 members (15) compared to the Experimental Group (11). There were also no significant differences between the two groups for each of the individual activities of daily living as well as the total mean score (Table 11).

The results of the comparison of the two groups for the Instrumental Activities of Daily Living at three months resembled the findings at admission. Only transportation was significantly different ($p=.001$) with 20 of the 37 Experimental Group members able to use transportation without help; 16, with some help; and 1, "can't" do it at all. The corresponding figures for the Control Group were 4, without help; 21, with some help; and 5, can't do it at all. The total mean IADL scores also show no statistical difference (Table 12).

A second set of analyses computed the change in the scores of the Experimental and Control Groups between admission and three months later, and compared them using the t-test. As shown in Table, there were no values that were significant at the $p<.05$ level. If the mean difference between admission and three months later was a positive number, then the score was higher at admission than three months later, representing a gain in function since higher scores are associated with greater functional impairment. If the mean difference was zero, than there was no difference in the three month period. A negative value means that the person was less functional in that particular activity on the quarterly reassessment. For the Experimental Group, gains were registered in six of the activities; only in Bowel Control was there a loss of function. Among the Control Group clients, there were no changes in bathing and dress, some gains made in bladder and bowel control, transferring from bed/chair and getting around inside, while there were losses in function for eating and toileting. However, as indicated above, the differences between the two groups were not statistically significant.

A similar comparison of the change in the instrumental activities of daily living scores of the two groups for the three month period resulted in no significant differences. Some improvement in functional rating for the Experimental Group was noted for meal preparation, housework, shopping, taking medications, and getting around outside; no change for laundry, money management, and using the telephone; and reduced ability to manage transportation. The Control Group exhibited some positive change

TABLE 11 ASSESSMENT OF FUNCTIONAL (ADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS THREE MONTHS AFTER ADMISSION INTO THE STUDY

	Experimental n=37		Control n=39	
	#	%	#	%
a) Functional Impairment Level (FIL)				
Level 1	6	(16.2)	7	(17.9)
Level 2	7	(18.9)	7	(17.9)
Level 3	11	(29.7)	15	(38.5)
Level 4	12	(32.4)	8	(20.5)
Level 5	1	(2.7)	2	(5.1)
p=.7772				
a) Bathing				
Completely able	12	(32.4)	13	(33.3)
Able with aids/difficulty	8	(21.6)	6	(15.4)
Able with helper	16	(43.2)	17	(43.6)
Completely unable	1	(2.7)	3	(7.7)
p=.7281				
b) Dressing				
Completely able	18	(48.6)	18	(46.2)
Able with aids/difficulty	8	(26.1)	11	(28.2)
Able with helper	11	(29.7)	7	(17.9)
Completely unable	-		3	(7 7)
p=.2296				
c) Eating				
Completely able	32	(86.5)	30	(76.9)
Able with aids/difficulty	2	(5.4)	5	(12.8)
Able with helper	3	(8.1)	3	(7.7)
Completely unable	-		1	(2.6)
p=.5127				
d) Toileting				
Completely able	28	(75.7)	24	(61.5)
Able with aids/difficulty	4	(10.8)	7	(17.9)
Able with helper	5	(13.5)	6	(15.4)
Completely unable	-		2	(5.1)
p=.3667				

TABLE 11 ASSESSMENT OF FUNCTIONAL (ADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS THREE MONTHS AFTER ADMISSION INTO THE STUDY (cont.)

	Experimental n=37		Control n=39	
	#	%	#	%
e) Bladder Control				
Completely able	28	(75.7)	27	(69.2)
Able with aids/difficulty	3	(8.1)	1	(2.6)
Able with helper	4	(10.8)	9	(23.1)
Completely unable	2	(5.4)	2	(5.1)
p=.4088				
f) Bowel Control				
Completely able	32	(88.9)	32	(82.1)
Able with aids/difficulty	2	(5.6)	3	(7.7)
Able with helper	2	(5.6)	2	(5.1)
Completely unable	-		2	(5.1)
p=not significant				
g) Transfer from Bed/Chair				
Completely able	16	(43.2)	16	(41.0)
Able with aids/difficulty	6	(40.5)	18	(46.2)
Able with helper	4	(16.2)	4	(10.1)
Completely unable	-		1	(2.6)
p=.6546				
h) Get Around Inside				
Completely able	17	(45.9)	14	(35.9)
Able with aids/difficulty	16	(43.2)	21	(53.8)
Able with helper	4	(10.8)	2	(5.1)
Completely unable	-		2	(5.1)
p=.3102				
i) Total ADL Score (mean)	4.81		5.64	
p=.5053				

TABLE 12 ASSESSMENT OF FUNCTIONAL (IADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS THREE MONTHS AFTER ADMISSION INTO THE STUDY

	Experimental n=37		Control n=39	
	#	%	#	%
a) Meal Preparation				
Without help	8	(21.6)	10	(25.6)
With some help	20	(54.1)	17	(43.6)
Can't do it at all	9	(24.3)	12	(30.8)
p=.6564				
b) Housework				
Without help	4	(10.8)	2	(5.1)
With some help	15	(40.5)	15	(38.5)
Can't do it at all	18	(48.6)	22	(56.4)
p=.6021				
c) Laundry				
Without help	5	(13.5)	2	(5.1)
With some help	11	(29.7)	14	(35.9)
Can't do it at all	21	(56.8)	23	(59.0)
p=.4306				
d) Shopping				
Without help	1	(2.7)	2	(5.1)
With some help	16	(43.2)	17	(43.6)
Can't do it at all	20	(54.1)	20	(51.3)
p=.8559				
e) Taking Medications				
Without help	28	(75.7)	23	(59.0)
With some help	9	(24.3)	14	(35.9)
Can't do it at all	-		2	(5.1)
p=.1714				

TABLE 12 ASSESSMENT OF FUNCTIONAL (IADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS THREE MONTHS AFTER ADMISSION INTO THE STUDY (cont.)

	Experimental n=37		Control n=39	
	#	%	#	%
f) Getting Around Outside				
Without help	10	(27.0)	13	(33.3)
With some help	25	(67.6)	21	(53.8)
Can't do it at all	2	(5.4)	5	(12.8)
p=.3728				
g) Transportation				
Without help	20	(54.1)	4	(19.3)
With some help	16	(43.2)	26	(66.7)
Can't do it at all	1	(2.7)	9	(23.1)
p=.0001				
h) Money Management				
Without help	7	(45.9)	19	(48.7)
With some help	18	(48.6)	12	(30.8)
Can't do it at all	2	(5.4)	8	(20.5)
p=.0880				
i) Uses Telephone				
Without help	33	(89.2)	33	(84.6)
With some help	3	(8.1)	3	(7.7)
Can't do it at all	1	(2.7)	3	(7.7)
p=.6225				
j) Total IADL Score (mean)	7.59		8.90	
p=.1391				

TABLE 13 CHANGE*IN ADL AND IADL SCORES FROM TIME OF ADMISSION INTO THE STUDY TO THREE MONTHS LATER FOR EXPERIMENTAL AND CONTROL GROUP MEMBERS

	Experimental Group Mean n=37	Control Group Mean n=39	Significance
ADLs			
Bathing	.2432	.0000	p=.0824
Dressing	.0270	.0000	p=.8399
Eating	.1081	-.0513	p=.0818
Toileting	.0811	-.0513	p=.1990
Bladder Control	.1081	.0769	p=.8053
Bowel Control	-.1892	.0256	p=.4004
Transfer from Bed/Chair	.1892	.0769	p=.2367
Getting Around Inside	.0811	.0256	p=.6413
IADLs			
Meal Preparation	.0270	.1538	p=.0824
Housework	.0270	-.1026	p=.2632
Laundry	.0000	-.0256	p=.8162
Shopping	.0541	.1282	p=.5387
Taking Medications	.0270	.0000	p=.7032
Getting Around Outside	.0811	.0769	p=.9635
Transportation	-.1351	-.0256	p=.3270
Money Management	.0000	.0000	p=1.000
Using Telephone	.0000	.0000	p=1.000

*Positive numbers indicate that the group was functioning more independently after three months in the study; negative numbers, less independently.

for meal preparation, shopping, and getting around outside; no change in functional capacity with regard to taking medications, money management, and using the telephone; and more dependency in housework, laundry, and transportation (Table 13).

Three months after admission, the functional status of each of the groups was statistically alike, for all the ADLs and IADLs, except, again, transportation, which continued to be better managed by the Experimental Group. At this stage a comparison of the functional status of the two groups as exemplified by their mean ADL and IADL scores indicated no significant difference, although the mean scores of both groups were a little lower, indicating greater independence in functioning. When the change in scores over the three month period of the two groups were compared for each of the different activities of daily living and instrumental activities of daily living, however, no statistical differences appeared. The next set of data on the functional status of the clients, obtained approximately six months after admission into the study, is presented below.

Client Status at the Close of the Study

The analyses of the second set of quarterly reassessments were based on 27 Experimental Group clients and 32 Control Group clients. Although there were variations between the two groups in the frequency distribution of the FIL levels six months after admission to the study, the differences were not significant. Neither were there any statistical differences in the activities of daily living of the two groups a half year after admission, or in the instrumental activities of daily living, except for transportation, which again proved to be more difficult to manage for the Control Group than the Experimental Group (Table 14).

The ADL "change scores" were also compared. At six months, the Control Group clients were more functionally impaired than they were at admission in all activities, except dressing, in which they showed no change. On the other hand, the Experimental Group showed slight improvement in bathing, transferring from bed/chair, and getting around inside, but no change in eating and bowel control and loss of function in dressing and bladder control. A comparison of the changes for each group indicates that they were not significant, except for transfer from bed/chair ($p=.0121$); the Control Group mean loss was about equivalent to the Experimental Group mean gain on this item. The p value for "getting around inside" was .0518, not quite a significant difference, but suggesting that the Control Group on average lost some function and the Experimental Group improved (Table 16).

There were no significant differences in the comparisons of the IADL "change scores" for the two groups although, again, the results for the Control Group members indicated greater dependence in all instrumental activities except meal preparation, whereas the Experimental Group members had slight gains in functional status for meal preparation as well as housework, no change in taking medications and getting around outside, and losses in laundry, shopping, transportation, money management, and using

TABLE 14 ASSESSMENT OF FUNCTIONAL (ADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS SIX MONTHS AFTER ADMISSION INTO THE STUDY

	Experimental n=27		Control n=32	
	#	%	#	%
a) Functional Impairment Level (FIL)				
Level 1	3	(11.1)	6	(18.8)
Level 2	5	(18.5)	7	(21.9)
Level 3	11	(40.7)	12	(37.5)
Level 4	8	(29.6)	6	(18.8)
Level 5	-		1	(3.1)
p=.6890				
a) Bathing				
Completely able	9	(33.3)	9	(28.1)
Able with aids/difficulty	5	(18.5)	3	(9.4)
Able with helper	12	(44.4)	18	(56.3)
Completely unable	1	(3.7)	2	(6.3)
p=.6546				
b) Dressing				
Completely able	11	(40.7)	14	(43.8)
Able with aids/difficulty	8	(29.6)	9	(28.1)
Able with helper	8	(29.6)	7	(21.9)
Completely unable	-		2	(6.3)
p=.5566				
c) Eating				
Completely able	22	(81.5)	22	(68.8)
Able with aids/difficulty	2	(7.4)	7	(21.9)
Able with helper	3	(11.1)	2	(6.3)
Completely unable	-		1	(3.1)
p=.3106				
d) Toileting				
Completely able	19	(70.4)	16	(50.0)
Able with aids/difficulty	6	(22.2)	10	(31.3)
Able with helper	2	(7.4)	4	(12.5)
Completely unable	-		2	(6.3)
p=.3191				

TABLE 14 ASSESSMENT OF FUNCTIONAL (ADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS SIX MONTHS AFTER ADMISSION INTO THE STUDY (cont.)

	Experimental n=27		Control n=32	
	#	%	#	%
e) Bladder Control				
Completely able	19	(70.4)	17	(53.1)
Able with aids/difficulty	1	(3.7)	2	(6.3)
Able with helper	4	(14.8)	11	(34.4)
Completely unable	3	(11.1)	2	(6.3)
p=.3191				
f) Bowel Control				
Completely able	23	(85.2)	24	(75.0)
Able with aids/difficulty	2	(7.4)	3	(9.4)
Able with helper	2	(7.4)	3	(9.4)
Completely unable	-		2	(6.3)
p=not significant				
g) Transfer from Bed/Chair				
Completely able	12	(44.4)	10	(31.3)
Able with aids/difficulty	12	(44.4)	16	(50.0)
Able with helper	3	(11.1)	4	(12.5)
Completely unable	-		2	(6.3)
p=.4771				
h) Get Around Inside				
Completely able	11	(40.7)	7	(21.9)
Able with aids/difficulty	15	(55.6)	20	(62.5)
Able with helper	1	(3.7)	2	(6.3)
Completely unable	-		3	(9.4)
p=.2083				
i) Total ADL Score (mean)	4.93		6.89	

the telephone.

Thus, after six months into the study, there were no differences in the functional status of the two groups with respect to activities of daily living and instrumental activities of daily living, except for ability to manage transportation. Although a comparison of the change scores of each of the activities for the two groups over the six month period revealed no statistical differences, in absolute values there were slight variations in the total mean scores for ADLs and IADLs from those at admission and three months, which suggested that the Experimental Group had made slight gains in function while the Control has some losses. Also, although the total mean ADL and IADL scores fluctuated slightly for the three test periods, the Experimental Group scores were generally lower than the Control Group which again suggests that the Experimental Group had greater functional capacity.

Because of the availability of annual reassessments on all EHC clients, it was possible to make still another set of comparisons; this time for those Experimental and Control Group members who remained clients of the SHCP and EHC, six months after the close of the study, or one year after admission into it. They are described in the section below.

Client Status One Year After Admission

At the end of the data collection period, there were 13 Experimental and 15 Control Group members who had remained study clients for at least a year's time and for whom annual CNAP assessments were available. (The other clients had been discharged because of improved condition, admission to nursing homes, death, or had not been admitted early enough in the study period to have completed a 12 month period as a study participant.)

When the two groups were compared on sociodemographic variables, health indicators, medical conditions, activities of daily living and instrumental activities of daily living, mental/emotional status, and socialization there were no statistical differences, except for ability to manage transportation (Tables 17-23). The two groups still differed with respect to this factor ($p=.0377$); 6 of the 13 Experimental Group clients could function without help, but none of the Control Group. Small sample size and problems with sample attrition made it unwise to carry out any further analysis of these groups.

B. UTILIZATION OF SERVICES

The data on service utilization were abstracted by a FSP staff person from the FSP medical records and the EHC service plan of each member of the Experimental and Control Groups for a six month period or until the person was admitted permanently to a nursing home or died (Exhibit 4). Ten services provided through EHC were listed. For each of these, the units authorized per month, authorized in total, and delivered in total were recorded. Because the Experimental clients were new to the system, they were some delays in serving them, due to "start-up time" and a

TABLE 15 ASSESSMENT OF FUNCTIONAL (IADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS SIX MONTHS AFTER ADMISSION INTO THE STUDY

	Experimental n=27		Control n=32	
	#	%	#	%
a) Meal Preparation				
Without help	7	(25.9)	6	(18.8)
With some help	14	(51.9)	16	(50.0)
Can't do it at all	6	(22.2)	10	(31.3)
p=.6729				
b) Housework				
Without help	1	(03.7)	1	(03.1)
With some help	15	(55.6)	14	(43.8)
Can't do it at all	11	(40.7)	17	(53.1)
p=.6367				
c) Laundry				
Without help	1	(3.7)	1	(3.1)
With some help	11	(40.7)	11	(34.4)
Can't do it at all	15	(55.6)	20	(62.5)
p=.8939				
d) Shopping				
Without help		-		-
With some help	12	(44.4)	11	(34.4)
Can't do it at all	15	(55.6)	21	(65.6)
p=.4295				
e) Taking Medications				
Without help	18	(66.7)	19	(59.4)
With some help	9	(33.3)	10	(31.3)
Can't do it at all		-	3	(9.4)
p=.2625				

TABLE 15 ASSESSMENT OF FUNCTIONAL (IADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS SIX MONTHS AFTER ADMISSION INTO THE STUDY (cont.)

	Experimental n=27		Control n=32	
	#	%	#	%
f) Getting Around Outside				
Without help	6	(22.2)	10	(31.3)
With some help	20	(74.1)	15	(46.9)
Can't do it at all	1	(3.7)	7	(21.9)
p=.0541				
g) Transportation				
Without help	13	(48.1)	1	(3.1)
With some help	12	(44.4)	26	(81.3)
Can't do it at all	2	(7.4)	5	(15.6)
p=.0003				
h) Money Management				
Without help	10	(37.0)	12	(37.5)
With some help	13	(48.1)	13	(40.6)
Can't do it at all	4	(14.8)	7	(21.9)
p=.7481				
i) Uses Telephone				
Without help	23	(85.2)	24	(75.0)
With some help	3	(11.1)	6	(18.8)
Can't do it at all	1	(3.7)	2	(6.3)
p=.not significant				
j) Total IADL Score (mean)	8.11		9.56	

TABLE 16 CHANGE*IN ADL AND IADL SCORES FROM TIME OF ADMISSION INTO THE STUDY TO SIX MONTHS LATER FOR EXPERIMENTAL AND CONTROL GROUP MEMBERS

	Experimental Group Mean n=27	Control Group Mean n=32	Significance
ADLs			
Bathing	.1852	-.0625	p=.1492
Dressing	-.1111	.0000	p=.5206
Eating	.0000	-.1563	p=.2018
Toileting	.0370	-.1563	p=.1296
Bladder Control	-.0370	-.1250	p=.5566
Bowel Control	.0000	-.0313	p=.8029
Transfer from Bed/Chair	.2222	-.2188	p=.0121
Getting Around Inside	.0370	-.2813	p=.0518
IADLs			
Meal Preparation	.0741	.1250	p=.7087
Housework	.0370	-.0313	p=.5338
Laundry	-.1111	-.0938	p=.8824
Shopping	-.0370	-.0313	p=.9616
Taking Medications	.0000	-.0625	p=.5678
Getting Around Outside	.0000	-.0938	p=.4115
Transportation	-.2963	-.1250	p=.2367
Money Management	-.1111	-.1613	p=.7127
Using Telephone	-.0370	-.0625	p=.8054

* Positive numbers indicate that the group was functioning more independently after six months in the study; negative numbers, less independently.

TABLE 17 AGE, SEX, MARITAL STATUS, LIVING ARRANGEMENT, AND FINANCIAL SITUATION OF THE EXPERIMENTAL AND CONTROL GROUP MEMBERS ONE YEAR AFTER ADMISSION INTO THE STUDY

	Experimental n=13	Control n=15
	# %	# %
a) Age (mean years)	83.69	81.00
P=.3608		
b) Sex		
Male	3 (23.1)	5 (33.3)
Female	10 (76.9)	10 (66.7)
p=.5491		
c) Marital Status		
Single	1 (7.7)	-
Married	-	2 (13.3)
Widowed	12 (92.3)	12 (80.0)
Divorced	-	1 (6.7)
Separated	-	-
p=.2751		
d) Living Arrangements		
Alone	10 (76.9)	11 (73.3)
Spouse	-	1 (6.7)
Spouse and family member(s)	-	1 (6.7)
Family member(s)	3 (23.1)	2 (13.3)
Non-family member(s)	-	-
Family and non-family member(s)	-	-
p=.5488		
e) Financial Situation		
Income eligible for home care	9 (69.2)	9(60.0)
SSI/OAA	-	1 (6.7)
Sliding fee	3 (23.1)	5 (33.3)
Over income	1 (7.7)	-
p=.4994		

TABLE 18 HEALTH INDICATORS OF THE EXPERIMENTAL AND CONTROL GROUP MEMBERS ONE YEAR AFTER ADMISSION INTO THE STUDY

	Experimental n=13		Control n=14	
	#	%	#	%
a) Self-Rated Health				
Excellent	-		-	
Good	9	(69.2)	1	(7.2)
Fair	3	(23.1)	9	(64.3)
Poor	1	(7.7)	4	(28.6)
b) Health Compared to Last Year				
Better	4	(30.8)	1	(14.3)
Same	4	(30 8)	4	(28.6)
Worse	5	(38.5)	8	(57.2)
p=.5159				
c) Days Since Last Hospital Stay	2079		1311	
p=.5558				

TABLE 19 MEDICAL CONDITIONS OF THE EXPERIMENTAL AND CONTROL GROUP MEMBERS ONE YEAR AFTER ADMISSION INTO THE STUDY

	Experimental n=13		Control n=14		Significance*
	#	%	#	%	
Heart and Circulatory Problems	10	(76.9)	11	(78.6)	
Arthritis	8	(61.5)	9	(64.3)	
Alteration in Nutritional Status	1	(7.7)	2	(14.3)	
Diseases of the Eye	4	(30.8)	7	(50.0)	
Fractures	1	(7.7)	2	(14.3)	
Diseases of the Musculo-Skeletal System	4	(30.8)	3	(21.4)	
Diabetes	1	(8.3)	4	(28.6)	
Respiratory Conditions	2	(16.7)	5	(35.7)	
Cancer	2	(15.4)	-		
Diseases of the Digestive System	1	(7.7)	4	(28.6)	
Alteration in Skin Integrity	4	(8.0)	1	(4.5)	
Alzheimer's Disease and Related Disorders	1	(7.7)	-		
Diseases of the Nervous System	2	(4.0)	3	(13.6)	
Diseases of the Genito-Urinary System	1	(7.7)	1	(7.2)	
Other Problems	2	(15.4)	2	(14.3)	

* Chi-square and Fisher's exact test analysis showed no significant differences between the Experimental and Control Group members for each of the above conditions at $p < .05$.

TABLE 20 ASSESSMENT OF FUNCTIONAL (ADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS ONE YEAR AFTER ADMISSION INTO THE STUDY

	Experimental n=13		Control n=15	
	#	%	#	%
a) Functional Impairment Level (FIL)				
Level 1	2	(15.4)	1	(6.7)
Level 2	3	(23.1)	-	
Level 3	3	(23.1)	12	(80.0)
Level 4	5	(38.5)	1	(6.7)
Level 5	-		1	(6.7)
a) Bathing				
Completely able	5	(38.5)	2	(13.3)
Able with aids/difficulty	3	(23.1)	5	(33.3)
Able with helper	5	(38.5)	8	(53.3)
Completely unable	-		-	
p=.3093				
b) Dressing				
Completely able	8	(61.5)	8	(53.5)
Able with aids/difficulty	1	(7.7)	5	(33.3)
Able with helper	4	(30.8)	2	(13.3)
Completely unable	-		-	
p=.2012				
c) Eating				
Completely able	10	(76.9)	12	(75.0)
Able with aids/difficulty	1	(7.7)	3	(25.0)
Able with helper	2	(15.4)	-	
Completely unable	-		-	
p=.2171				
d) Toileting				
Completely able	10	(76.9)	8	(53.3)
Able with aids/difficulty	3	(23.1)	6	(40.0)
Able with helper	-		1	(6.7)
Completely unable	-		-	
p=.3517				

TABLE 20 ASSESSMENT OF FUNCTIONAL (ADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS ONE YEAR AFTER ADMISSION INTO THE STUDY (cont.)

	Experimental n=13		Control n=15	
	#	%	#	%
e) Bladder Control				
Completely able	6	(46.1)	11	(73.3)
Able with aids/difficulty	-		2	(13.3)
Able with helper	5	(38.5)	2	(13.3)
Completely unable	2	(15.4)	-	
p=.0840				
f) Bowel Control				
Completely able	10	(76.9)	13	(86.7)
Able with aids/difficulty	1	(7.7)	2	(13.3)
Able with helper	2	(15.4)	-	
Completely unable	-		-	
p=.2732				
g) Transfer from Bed/Chair				
Completely able	6	(46.1)	3	(20.0)
Able with aids/difficulty	6	(46.1)	12	(80.0)
Able with helper	1	(7.7)	-	
Completely unable	-		-	
p=.1439				
h) Get Around Inside				
Completely able	7	(53.9)	4	(26.7)
Able with aids/difficulty	6	(46.1)	11	(73.3)
Able with helper	-		-	
Completely unable	-		-	
p=.1419				
i) Total ADL Score (mean)	5.00		4.80	
p=.1987				

TABLE 21 ASSESSMENT OF FUNCTIONAL (IADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS ONE YEAR AFTER ADMISSION INTO THE STUDY

	Experimental n=13		Control n=15	
	#	%	#	%
a) Meal Preparation				
Without help	6	(46.2)	2	(13.3)
With some help	5	(38.5)	9	(60.0)
Can't do it at all	2	(15.4)	4	(26.7)
p=.1584				
b) Housework				
Without help	-		-	
With some help	7	(53.9)	3	(33.3)
Can't do it at all	6	(46.1)	10	(66.7)
p=.2740				
c) Laundry				
Without help	1	(7.7)	1	(6.7)
With some help	6	(46.2)	4	(26.7)
Can't do it at all	6	(46.2)	10	(66.7)
p=.5316				
d) Shopping				
Without help	-		-	
With some help	8	(61.5)	4	(26.7)
Can't do it at all	5	(38.5)	11	(73.3)
p=.0629				
e) Taking Medications				
Without help	10	(76.9)	11	(73.3)
With some help	3	(23.1)	4	(26.7)
Can't do it at all	-		-	
p=.8268				

TABLE 21 ASSESSMENT OF FUNCTIONAL (IADL) STATUS OF EXPERIMENTAL AND CONTROL GROUP MEMBERS ONE YEAR AFTER ADMISSION INTO THE STUDY (cont.)

	Experimental n=13		Control n=15	
	#	%	#	%
f) Getting Around Outside				
Without help	5	(38.5)	2	(13.3)
With some help	7	(53.9)	13	(86.7)
Can't do it at all	1	(7.7)	-	
p=.1379				
g) Transportation				
Without help	6	(30.8)	-	
With some help	7	(53.9)	14	(93.3)
Can't do it at all	2	(15.4)	1	(6.7)
p=.0377				
h) Money Management				
Without help	3	(23.1)	4	(26.7)
With some help	8	(61.5)	9	(60.0)
Can't do it at all	2	(15.4)	2	(13.3)
p=.9709				
i) Uses Telephone				
Without help	11	(84.6)	12	(80.0)
With some help	1	(7.7)	3	(20.0)
Can't do it at all	1	(7.7)	-	
p=.3847				
j) Total IADL Score (mean)	7.85		9.40	
p=.1987				

TABLE 22 ASSESSMENT OF THE MENTAL/EMOTIONAL STATUS OF THE EXPERIMENTAL AND CONTROL GROUP MEMBERS ONE YEAR AFTER ADMISSION INTO THE STUDY

	Experimental n=12		Control n=22	
	#	%	#	%
a) Client Appears Oriented to Time, Place and Person				
Yes	11	(91.7)	22	(100)
No	1	(8.3)	-	
Sometimes	-		-	
b) Client Appears Agitated				
Yes			1	(4.6)
No	12	(100.)	21	(95.4)
Sometimes	-		-	
c) Client Appears Depressed				
Yes	1	(8.3)	5	(22.7)
No	11	(91.7)	17	(77.3)
Sometimes	-		-	

TABLE 23 ASSESSMENT OF SOCIALIZATION OF EXPERIMENTAL AND CONTROL GROUP MEMBERS ONE YEAR AFTER ADMISSION INTO THE STUDY

	Experimental		Control	
	#	%	#	%
a) Client Has Daily Contact	n=13		n=23	
Yes	13	(100.)	21	(91.3)
No	-		2	(8.7)
b) Type of Contact (yes responses)	n=11		n=14	
Visits	3	(27.3)	2	(14.3)
Telephone	4	(36.4)	7	(50.0)
Visits and telephone contact	2	(18.2)	5	(35.7)
Lives with other(s)	-		-	
Lives with others and visits	2	(18.2)	-	
Lives with others and telephone contact	-		-	
Lives with others, visits and telephone contact	-		-	
c) Who are the client's contacts?	n=12		n=18	
Spouse			1	(5.6)
Children	3	(25.0)	3	(16.7)
Family members	3	(25.0)	6	(33.3)
Friends	-		1	(5.6)
Family and Friends	3	(25.0)	2	(11.1)
Other	3	(25.0)	5	(27.8)
d) Contact With Groups/Organizations	n=13		n=22	
Yes	4	(30.8)	5	(22.7)
No	9	(69.2)	17	(77.3)
e) Satisfied With Level of Socialization	n=13		n=22	
Yes	13	(100.)	20	(90.9)
No	-		2	(9.1)

serious shortage of homemakers and home health aides. The Control Group members already had a service package in place and thus were not subject to this delay. Thus, comparing the "actual" amounts of service might have biased the results in favor of the Controls. Similarly, the "authorized-total" values were suspect since they were not adjusted for unpredicted cessation of service such as hospitalization, vacation, and illness. Although data are presented for all three categories, the most accurate for comparing level of need is probably the "authorized per month," since that represents the judgment of the clinical team or case manager irrespective of the issues given above. The data on utilization are presented in the following pages. Significant differences in the utilization of services by the two groups was determined by the t-test.

Among the Experimental Group members, the most utilized services were homemaker services (n=33), meals on wheels (18), transportation (13), and homemaker/personal care services (12). Other services (companions, social day care,home health aides, chore services) were used by less than 7 members of the group. The Control Group members were most likely to use homemaker (n=42), homemaker/personal care (18), transportation (18) and meals on wheels (17). Less than 10 members used chore, companion, social day care, and home health aides (Table 24).

In comparing the two groups' utilization of the four most common services, only homemaker services was a significant factor (hours authorized/month, p=.0187). The Experimental Group were authorized to receive 14.55 hours of homemaker services per month compared to 18.79 for the Control Group. The number of delivered meals authorized per month to the Experimental Group averaged 22.44 per client whereas the Control Group were to receive 20.18. Homemaker/personal care hours authorized per month provided per Experimental client was 9.15; per Control Group client, 8.44 hours. For the Experimental clients, the mean number of transportation trips authorized per month was 12.31; for the Control clients, it was 7.64. Except for homemaker services, there were no differences in the utilization of services by the two groups, whether authorized per month, authorized in total, or the total amount delivered.

In addition to the previously described EHC services, the study clients also could potentially receive four FSP services: skilled nursing, physical therapy, speech therapy and home health aide services. (Also documented were the total units of equipment and other hours/visits not recorded under the previous mentioned services but these involved 7 clients or less in each group, and thus will not be presented here. (See Table 25). Twenty-eight of the Experimental Group received an average of 11.14 visits of skilled nursing compared to 31 of the Control Group, who were provided with an average of 30.09 units. Physical therapy was utilized by 11 members of each group; the average number of visits made to Experimental Group clients was 7.73 and to the Control Group members, 5.00. Both groups received just about the same amount of home health aide hours: 10.75 for the Experimental Group and 10.07 for the Control. No one in either group was given speech therapy.

The final set of services recorded for each study participant

TABLE 24 UTILIZATION OF ELDER HOME CARE SERVICES AUTHORIZED PER MONTH, AUTHORIZED IN TOTAL, AND DELIVERED IN TOTAL FOR EXPERIMENTAL AND CONTROL GROUP MEMBERS

	Experimental Mean	(n)	Control Mean	(n)	Sig.
a) Homemaker/Personal Care					
Hours authorized/mth	9.15	(13)	8.44	(18)	p=.7724
Hours authorized-total	30.33	(12)	42.22	(18)	p=.3904
Hours delivered-total	8.25	(12)	19.67	(18)	p=.0986
b) Homemaker					
Hours authorized/mth	14.55	(33)	18.79	(42)	p=.0187
Hours authorized-total	52.94	(31)	98.45	(42)	p=.0001
Hours delivered-total	27.58	(33)	60.93	(42)	p=.0008
c) Homemaker-Evening/ Weekends					
Hours authorized/mth	-		13.00	(1)	
Hours authorized-total	-		77.00	(1)	
Hours delivered-total	-		34.00	(1)	
d) Companions					
Hours authorized/mth	11.14	(7)	14.25	(4)	
Hours authorized-total	57.14	(7)	74.25	(4)	
Hours delivered-total	25.29	(7)	-		
e) Social Day Care					
Days authorized/mth	9.00	(2)	6.25	(4)	
Days authorized-total	54.00	(2)	32.25	(4)	
Days delivered-total	25.00	(2)	15.00	(4)	
f) Meals-on-Wheels					
Meals authorized/mth	22.44	(18)	20.18	(17)	p=.0525
Meals authorized-total	82.72	(18)	108.76	(17)	p=.0857
Meals delivered -total	47.56	(18)	66.29	(17)	p=.2130

TABLE 24 UTILIZATION OF ELDER HOME CARE SERVICES AUTHORIZED PER MONTH, AUTHORIZED IN TOTAL, AND DELIVERED IN TOTAL FOR EXPERIMENTAL AND CONTROL GROUP MEMBERS (cont.)

	Experimental Mean (n)	Control Mean (n)	Sig.
g) Transportation			
Trips authorized/mth	12.31 (13)	7.64 (22)	p=.2252
Trips authorized-total	59.54 (13)	41.82 (22)	p=.3822
Trips delivered-total	15.38 (13)	15.23 (22)	p=.9853
h) Home Health Aide			
Hours authorized/mth	21.50 (2)	14.67 (3)	
Hours authorized-total	67.00 (2)	56.00 (3)	
Hours delivered-total	42.50 (2)	- (3)	
i) Chore Services			
Hours authorized/mth	2.33 (3)	1.10 (10)	
Hours authorized-total	12.00 (3)	4.70 (10)	
Hours delivered-total	5.00 (3)	5.00 (10)	
j) Other Home Care			
Units authorized/mth	11.33 (3)	15.25 (4)	
Hours authorized-total	3.00 (7)	54.25 (4)	
Hours delivered-total	- (7)	18.50 (4)	

TABLE 25 UTILIZATION OF FALLON SENIOR PLAN SERVICES BY EXPERIMENTAL AND CONTROL GROUP MEMBERS DURING LENGTH OF STAY IN STUDY

	Experimental mean (n)	Control mean (n)	Sig.
a) Skilled Nursing			
Visits authorized	11.96 (28)	31.00 (32)	p=.1573
Visits delivered-total	11.14 (28)	30.09 (31)	p=.1608
b) Physical Therapy			
Visits authorized	7.73 (11)	5.45 (11)	
Visits delivered-total	7.73 (11)	5.00 (11)	
c) Speech Therapy			
Visits authorized	-	-	
Visits delivered-total	-	-	
d) Home Health Aide			
Visits authorized	10.75 (12)	11.60 (15)	p=.8656
Visits delivered-total	10.75 (12)	10.07 (15)	p=.8944
e) Other Equipment			
Units authorized	1.57 (7)	1.43 (7)	
Units delivered-total	1.57 (7)	1.43 (7)	
f) Other Units/Visits			
Units/Visits authorized	6.67 (3)	2.00 (3)	
Units/Visits delivered	.67 (3)	-	
g) Clinical Visits	6.13 (45)	6.72 (29)	p=.6103
h) Acute Hospital Days	16.06 (16)	8.60 (25)	p=.1717
i) Rehabilitation Days	-	-	
j) Nursing Home Days	13.00 (3)	13.05 (2)	p=.9508
k) Day Surgery Days	1.00 (1)	-	

consisted of clinical visits and acute hospital, rehabilitation hospital, nursing home, and day surgery days. Among the 50 Experimental Group members, 45 had visited the Fallon Clinic on average 6.13 times in the study period, a number almost identical to the 6.72 visits made by the 29 members of the Control Group. Although the average number of acute hospital days (16.06) utilized by the Experimental Group members (n=16) was almost twice (8.60) that of the Control Group (n=25), the difference was not statistically significant. Neither group had any member that used rehabilitation hospital days. Nursing home days attributed to the Experimental Group averaged 5.29 for the 3 persons who used it compared to 12.02 days for the 2 Control Group members. Only 1 day surgery day was recorded, for one Experimental Group member. Overall, except for homemaker services, no significant differences were found between the two groups on the basis of service utilization although in some instances, the number of clients using a particular service was too small to test statistically.

C. CLIENT SATISFACTION AND WILLINGNESS TO PAY FOR SERVICES

Methodology

During the formulation of the initial proposal to the EOEA for funding, the Worcester Area Systems for Affordable Health Care had been contacted as a possible funding source. At that time, they expressed interest in working on the "client satisfaction" portion of the study. They agreed to pay a graduate student to assist in the development of the questionnaire and to conduct the interviews and to provide staff support for her efforts. The instrument used to obtain data about client satisfaction and willingness to pay incorporated part of a questionnaire that had been designed and pre-tested by a nursing student as a requirement for a course in research and suggestions from the SCHP and FCHP staff (Exhibit 5).

The twenty questions on the interview form took about 20-25 minutes, although the interviewer often spent an equivalent length of time conversing with the client. The form was pre-tested by the interviewer and modifications were made to clarify some of the questions. All clients received a letter explaining the study and alerting them that they would be receiving a telephone call from the interviewer for a home visit. Although the attempt was made to reach all the members in both groups, some persons had already been admitted to nursing homes, had died, or could not be reached by phone even after three attempts. Therefore, fewer clients made up this portion of the evaluation: 32 clients from the Experimental Group and 23 from the Control Group. In cases where the clients were unable to answer or had difficulty understanding the question, the caregiver was asked to furnish the information.

Results

Home Care Services History and Expectations

The first set of questions dealt with the clients' utilization and

expectations of home care. To set the stage for the questions that would follow, the clients were asked whether they had been in the hospital or nursing home in the previous five years and method of payment. Twenty-eight of the 32 members of the Experimental Group had been hospitalized in that period, and 17 of the 23 Control Group members, a difference which was not significant. For nursing homes, a positive response was given by 6 of the Experimental Group and 9 of the Control Group; again, not a statistical difference. A majority of both groups, (26 of the 29 Experimental Group clients and 14 of the Control Group clients) stated that Fallon Senior Plan had paid for the care. One Experimental Group member responded "Medicaid" and 2, Blue Cross/Blue Shield whereas 3 of the Control Group members answered "Medicare" and 2 cited "other." Some of these payments might have proceeded enrollment in the Fallon Senior Plan or perhaps the older person was not quite clear about the source of payment (Table 26).

A variety of reasons was given for using home care. Among the Experimental Group clients, the answers included being non-ambulatory (7), can't manage alone (6), fractures (5), illness (4). The Control Group clients cited most post-hospitalization most often (7), illness (5), and stroke (4). When asked how much longer they expected to use home care (less than 6 months, 6 months to a year, several years, rest of life, can't predict), the Experimental Group (11) were more likely to say that they couldn't predict whereas the Control Group (13) answered "rest of life."

The responses to the elders' expectation about future use of home care services were statistically different ($p=.0296$). Five of the 24 Experimental Group members expected to use the services for less than 6 months; 8, for the rest of their lives, and the others (11) couldn't predict. None of the Control Group foresaw terminating services within six months because they had already had been long-term clients of Elder Home Care so that 1 of the 19 answered "several years" and 13, "rest of life."

When asked if they had considered other ways to obtain care, 12 of the 27 Experimental Group members stated, "yes" and 15 of the 21 Control Group members; the others said, "no." Further questioning of those who replied positively showed that 4 of the Experimental Group would have looked to the family for help, another 4 would have to do without help, 1 would have had to go to a nursing home, and 2 gave other responses: "no other way" and "neighbors helped with meals." Among the Control Group responding affirmatively, 3 would have had to go to a nursing home, 3 would have done nothing, 2 would have asked the family, and 3 gave other responses, such as "I don't have any money" or "tried every place I could."

In response to the question of "Does anyone help you with care on a daily basis," the two groups of clients' answers were similar: 11 of the 31 Experimental group members and 10 of the 23 Control Group members said, "yes." Likewise, there was no statistical difference in reply to the inquiry, "Does anyone pay your home care cost?" Only 1 of 27 Experimental clients and 2 of the 21 Control clients answered affirmatively.

TABLE 26 EXPERIMENTAL AND CONTROL GROUP MEMBERS' HISTORY OF HOSPITALIZATION AND NURSING HOME UTILIZATION AND REASONS AND EXPECTATIONS FOR HOME CARE SERVICES

	Experimental n=32		Control n=23	
	#	%	#	%
a) Stay in Hospital in Last 5 Years				
Yes	28	(87.5)	17	(73.9)
No	4	(12.5)	6	(26.1)
p=.1975				
b) Stay in Nursing Home in Last 5 Years	n=31		n=23	
Yes	6	(19.4)	9	(39.1)
No	25	(80.6)	14	(60.9)
p=.1086				
c) Payment for Hospital and Nursing Home	n=29		n=19	
Fallon Senior Plan	26	(89.7)	14	(73.7)
Medicare/Medex	-		3	(15.8)
Medicaid	1	(3.4)	-	
BC/BS	2	(6.9)	-	
Other	-		2	(10.5)
p=.0413				
c) Need for Home Care Services	n=32		n=23	
Non-ambulatory client	7	(21.9)	1	(4.3)
Can't manage alone	6	(18.8)	3	(13.0)
Fractures	5	(15.6)	1	(4.3)
Illness	4	(12.5)	5	(21.7)
Stroke	2	(6.3)	4	(17.4)
Illness of spouse, relative	2	(6.3)	-	
Post-hospitalization	2	(6.3)	7	(30.4)
Other	4	(12.5)	2	(8.7)
d) How much longer expect to use home care services?	n=24		n=19	
Less than 6 months	5	(20.8)	-	
6 months to a year	-		-	
Several years	-		1	(5.3)
Rest of life	8	(33.3)	13	(68.4)
Can't predict	11	(45.8)	5	(26.3)
p=.0296				

Nevertheless, some of the clients were receiving help with overall finances: 7 of the 31 Experimental Group members received help compared to 11 of the 23 Control Group. Although not a statistical difference (p=.0517), it is almost at the significance level and does tend to confirm the earlier finding that among the Experimental Group, but not the Control group, there were clients who exceeded the maximum income level for EHC services. In answer to the question, "How did you feel about what you had to pay for home care services?," most clients in both groups acknowledged that they didn't pay, 23 of the 27 Experimental Group members and 16 of the 21 Control Group members (Table 27).

Overall, it is apparent that a majority of the members in both groups had had a hospitalization within the previous 5 years, but only a minority had a nursing home placement. Although the Fallon Senior Plan was mentioned by most members of both the Experimental and Control groups as the source of payment, a few mentioned other health plans. The need for home care covered a broad range of topics, with "non-ambulatory client" cited most often by the Experimental Group members and "post hospitalization" by the Control Group members. In comparison to the Control Group, most of whom expected to use home care for the rest of their lives, Experimental Group members were more apt to say they could not predict or that it would be less than six months. Clearly, home care was not a service that most of the clients had been accustomed to purchasing.

Client Satisfaction

To determine how satisfied the clients were with the EHC services provided to them, three sets of questions were used. The first asked about satisfaction with the "amount" of each of the 9 services (not enough, right amount, and too much) and the second, with the "quality" of the 9 services (poor, fair, good and excellent); the third, included three questions about overall satisfaction.

Of all the services tested, only case management produced a significant difference (p=.0487) in the amounts used by the Experimental and Control Groups. It was also the one that had the largest number of responses. Unfortunately, some of the other services were used by too few clients to make comparisons. To the question regarding case manager services, 25 Experimental Group said that it was the right amount and 1 said it was not enough in contrast to 17 Control Group members who replied it was the right amount and 5 who stated it was not enough. Fifteen of 17 Experimental Group clients reported that they had received the right amount of homemaker hours, and 2 replied that they did not have enough. The comparable figures for the 18 members in the Control Group were 12 and 6.

Among the 15 Experimental Group members replying to the question about meals-on-wheels, 12 answered that they received the right amount and 3, not enough; 12 of the 14 Control Group members also said that they received the right amount; 1, not enough; and 1, too much. With regard to personal care services, the responses for the Experimental Group included

TABLE 27 EXPERIMENTAL AND CONTROL GROUP MEMBERS' RESPONSES ABOUT HELP AND ITS COSTS

	Experimental	Control
	# %	# %
a) Did you consider other ways to obtain help?	n=27	n=21
Yes	12 (40.0)	5 (23.8)
No	18 (60.0)	16 (76.2)
p=.2274		
b) What else did you consider doing?	n=11	n=11
Family help	4 (36.4)	2 (18.2)
Nursing home	1 (9.1)	3 (27.3)
Nothing	4 (36.4)	3 (27.3)
Other	2 (18.2)	3 (27.3)
p=.5701		
c) Does anyone help you with care on a daily basis?	n=31	n=23
Yes	11 (35.3)	10 (43.5)
No	20 (64.5)	13 (56.5)
p=.5513		
d) Does anyone pay your home care costs?	n=27	n=21
Yes	1 (3.7)	2 (9.5)
No	16 (96.3)	19 (90.5)
p=.4086		
e) Does anyone help you with finances?	n=31	n=23
Yes	7 (22.6)	11 (47.8)
No	24 (77.4)	12 (52.2)
p=.0517		
e) How did you feel about what you had to pay for home care services?	n=27	n=21
Didn't pay	23 (85.2)	16 (76.2)
No	3 (11.1)	3 (14.3)
Other	1 (3.7)	2 (9.5)
p=.6528		

7, right amount; 4, not enough; and 1, too much compared. All 7 of the Control Group, who answered this question, replied that they received the right amount. The amount of transportation services was judged to be correct by all 10 of the Experimental Group who chose to reply to the question. For the 9 Control Group members responding, 6 said, right amount; 2, not enough; and 1, too much. Less than 5 members of each group stated that they received any of the other 4 services (companion, home health aide, social day care, and chore services), so those findings are not presented here but can be found in Table 28.

There were no statistical differences in the responses of the two groups to the question on quality of services. When comparing the total of good-excellent answers of the Experimental Group members for the 5 most used services (case management, homemaker, meal, personal care and transportation), the proportion of clients' answers in this category ranged from 61.6 percent for meal services to 100 percent for transportation. Case manager services was 85.7 percent; homemaker services, 88.9 percent; and personal care, 90.9 percent. The distribution of good-excellent answers for the Control Group was 61.5 percent for meal service; 66.6 percent, personal care services; 86.9 percent, case management; and 100 percent, homemaker services and transportation (Table 29).

When the groups were asked if they received the services they wanted, 5 of the 32 Experimental Group clients said, yes, definitely and 23, yes, generally. The responses for the 22 Control Group members included 1, yes, definitely and 16, yes, generally. To the direct question of "Were you satisfied with the amount of help?," 29 of the 31 Experimental clients were in the very or mostly satisfied category and 19 of the 23 Control Group members. Similarly, 28 of the 30 Experimental Group and 21 of the 23 Control Group said that they were either very or mostly satisfied with the services. No statistical differences in the two groups were found in the responses to these three questions.

Generally, the clients in both groups were likely to state that they had received the right amount of services and that the quality was "good." A few evidently thought that they had not received enough and a like number found the quality to be "poor," but there were also several who rated the services as "excellent." By and large, both groups were satisfied with the amount of help and the services, with no differences between the two client groups.

Importance of Services in Remaining At Home

Again, the clients were presented with a list of services and this time asked how important they were in helping them remain at home (not very important, somewhat important, and very important). All of the services referred to above, except case management, were included. No statistical comparisons were made because of the small number of responses. Among the four most used services by the Experimental Group [homemaker (18), meals (14), personal care (11), and transportation (10)], transportation had the largest proportion of "very important" responses

TABLE 28 EXPERIMENTAL AND CONTROL GROUP MEMBERS' RESPONSES ABOUT THE AMOUNT OF SERVICES RECEIVED

	Experimental n=32		Control n=22	
	#	%	#	%
a) Case Manager Services	n=26		n=22	
Not enough	1	(3.8)	5	(22.7)
Right amount	25	(96.2)	17	(77.3)
Too much	-		-	
p=.0487				
b) Personal Care Services	n=12		n=7	
Not enough	4	(33.3)	-	
Right amount	7	(58.3)	7	(100.)
Too much	1	(8.3)	-	
p=.1382				
c) Homemaker Services	n=17		n=18	
Not enough	2	(11.8)	6	(33.3)
Right amount	15	(88.2)	12	(66.7)
Too much	-		-	
p=.1288				
d) Companion Services	n= 4		n= 2	
Not enough	2	(50.0)	2	(100.)
Right amount	2	(50.0)	-	
Too much	-		-	
e) Chore Services	n= 4		n= 5	
Not enough	1	(25.0)	2	(40.0)
Right amount	3	(75.0)	3	(60.0)
Too much	-		-	

TABLE 28 EXPERIMENTAL AND CONTROL GROUP MEMBERS' RESPONSES ABOUT THE AMOUNT OF INDIVIDUAL SERVICES RECEIVED (cont.)

	Experimental n=32		Control n=22	
	#	%	#	%
f) Home Health Aide Services	n= 2		n=0	
Not enough	1	(50.0)	-	
Right amount	1	(50.0)	-	
Too much	-		-	
g) Transportation Services	n=10		n= 9	
Not enough	-		2	(22.2)
Right amount	10	(100.)	6	(66.7)
Too much	-		1	(11.1)
p=.1382				
h) Social Day Care Services	n= 3		n= 2	
Not enough	3	(100.)	1	(50.0)
Right amount	-		1	(50.0)
Too much	-		-	
i) Meal Services	n=15		n=14	
Not enough	3	(20.0)	1	(7.1)
Right amount	12	(80.0)	12	(85.7)
Too much	-		1	(7.1)
p=.3738				
j) Number of Months Using Home Care Services	n=32		n=23	
Less than 1 year	6	(18.8)	2	(8.7)
More than 1 year, but less than 2	5	(15.6)	1	(4.3)
2 years or more	21	(65.6)	20	(87.0)
p=.1914				

TABLE 29 EXPERIMENTAL AND CONTROL GROUP MEMBERS' RESPONSES ABOUT THE QUALITY OF SERVICES RECEIVED

	Experimental n=32		Control n=22	
	#	%	#	%
a) Case Manager Services	n=28		n=22	
Poor	1	(3.6)	-	
Fair	3	(10.7)	3	(13.0)
Good	21	(75.0)	13	(56.5)
Excellent	3	(10.7)	7	(30.4)
p=.2581				
b) Personal Care Services	n=11		n= 9	
Poor	-		1	(11.1)
Fair	1	(9.1)	2	(22.2)
Good	6	(54.5)	4	(44.4)
Excellent	4	(36.4)	2	(22.2)
p=.5276				
c) Homemaker Services	n=18		n=18	
Poor	1	(5.6)	-	
Fair	1	(5.6)	-	
Good	9	(50.0)	13	(72.2)
Excellent	7	(38.9)	5	(27.8)
p=.3824				
d) Companion Services	n= 5		n= 3	
Poor	1	(20.0)	-	
Fair	-		-	
Good	3	(60.0)	1	(33.3)
Excellent	1	(20.0)	2	(66.7)
e) Chore Services	n= 3		n= 3	
Poor	-		-	
Fair	1	(33.3)	-	
Good	2	(66.7)	2	(66.7)
Excellent	-		1	(33.3)

TABLE 29 EXPERIMENTAL AND CONTROL GROUP MEMBERS' RESPONSES ABOUT THE QUALITY OF SERVICES RECEIVED (cont.)

	Experimental n=32		Control n=22	
	#	%	#	%
f) Home Health Aide Services	n= 2		n=0	
Poor	-		-	
Fair	-		-	
Good	1	(50.0)	-	
Excellent	1	(50.0)	-	
g) Transportation Services	n=12		n= 9	
Poor	-		-	
Fair	-		-	
Good	9	(75.0)	5	(55.6)
Excellent	3	(25.0)	4	(44.4)
p=.3496				
h) Social Day Care Services	n= 2		n= 2	
Poor	-		-	
Fair	-		-	
Good	1	(50.0)	-	
Excellent	1	(50.0)	2	(100.)
i) Meal Services	n=13		n=13	
Poor	2	(15.4)	2	(15.4)
Fair	3	(23.1)	3	(23.1)
Good	6	(46.2)	8	(61.5)
Excellent	2	(15.4)	-	
p=.5153				

TABLE 30 EXPERIMENTAL AND CONTROL GROUP MEMBERS' SATISFACTION WITH HELP AND SERVICES

	Experimental	Control
	# %	# %
a) Did you get the services you wanted?	n=32	n=22
Yes, definitely	5 (15.6)	1 (4.5)
Yes, generally	23 (71.9)	15 (68.2)
No, not really	2 (6.3)	6 (27.3)
No, definitely not	2 (6.3)	-
p=.0810		
b) Were you satisfied with the amount of help?	n=31	n=23
Very satisfied	11 (35.5)	3 (13.0)
Mostly satisfied	18 (58.1)	16 (69.6)
Indifferent/mildly dissatisfied	-	3 (13.0)
Quite dissatisfied	2 (6.5)	1 (4.3)
p=.0722		
c) Were you satisfied with the services?	n=30	n=23
Very satisfied	7 (23.3)	4 (17.4)
Mostly satisfied	21 (70.0)	17 (73.9)
Indifferent/mildly dissatisfied	1 (3.3)	2 (8.7)
Quite dissatisfied	1 (3.3)	
p=.6420		

TABLE 31 EXPERIMENTAL AND CONTROL GROUP MEMBERS' RESPONSES ABOUT THE IMPORTANCE OF THE SERVICES IN REMAINING AT HOME

	Experimental	Control
	# %	# %
a) Homemaker Services	n=18	n=18
Not very important	2 (11.1)	-
Somewhat important	6 (33.3)	5 (27.8)
Very important	10 (55.6)	13 (72.2)
b) Personal Care Services	n=11	n= 6
Not very important	1 (9.1)	-
Somewhat important	2 (18.2)	1 (16.7)
Very important	8 (72.7)	5 (83.3)
c) Companion Services	n= 4	n=0
Not very important	-	-
Somewhat important	2 (50.0)	-
Very important	2 (50.0)	-
d) Chore Services	n= 3	n= 3
Not very important	-	-
Somewhat important	1 (33.3)	1 (33.3)
Very important	2 (66.7)	2 (66.7)
e) Home Health Aide Services	n=0	n=2
Not very important	-	-
Somewhat important	-	1 (50.0)
Very important	-	1 (50.0)
f) Meal Services	n=14	n=14
Not very important	-	1 (7.7)
Somewhat important	7 (50.0)	4 (30.8)
Very important	7 (50.0)	9 (69.2)
g) Transportation	n=10	n= 9
Not very important	-	-
Somewhat important	1 (10.0)	4 (44.4)
Very important	9 (90.0)	5 (54.6)
h) Social Day Care	n= 1	n=2
Somewhat important	1 (100.)	2 (100.)

(90 percent); next, was personal care (72.7 percent), homemaker services (55.6 percent) and meals (50 percent). The corresponding utilization figures for the Control Group were 18, homemaker services; 14, meal service; 9, transportation; and 6, personal care. The proportion of "very important" responses in decreasing order were 83.3 percent, personal care; 72.2 percent, homemaker services; 69.2 percent, meal services; and 54.6 percent, transportation (Table 31).

When asked to name the three services that they considered to be most important in allowing them to remain at home, the Experimental Group clients were more likely to list homemaker (12), then in order of importance, personal care (9), meals on wheels (7) and transportation (3). Likewise, the Control Group members were apt to cite homemaker services first (13), and then personal care (4) and meals (4). The other services were either named only once or not at all (Table 32).

Estimated Cost and Willingness to Pay

The clients were then asked how much they thought each of the services actually cost per visit (or per hour) and if their current payment plan for the home care services were to end, what would they be willing to pay. Generally, most clients replied "don't know" to both questions. Only homemaker, meal and personal care services received more than a few responses. Eleven of the Experimental Group estimated the cost per hour of homemaker services to be $7.73 (mean). The average amount that the Experimental Group members (6) were willing to pay for it was $9.67. Nine of the Control Group responded to the question on cost of homemaker services, the mean value of which was $6.11 per hour. Only 2 of the Control Group expressed a willingness to pay for homemaker; their responses averaged $6.50 an hour. Currently, no charge is made for meal service although clients are asked to make a contribution. The Experimental Group members (9) estimated the cost of a meal to be $2.00 and said that they would be willing to pay $2.00 per meal. Although 8 of the Control Group members estimated the cost of a meal, the mean value of which was $1.11, none of the gave a figure for how much they would be willing to pay. Seven members of the Experimental Group suggested a cost for personal care services, which averaged to be $7.75, but only two stated how much they would be willing to pay for personal services, suggesting $15.00 per hour (Table 33).

The next three questions in the interview dealt with willingness to pay for social services if they were to be part of the benefit package of the Fallon Senior Plan. Rather than being asked an open ended question, the clients were given a series of amounts which began with $5 and increased by $5 increments to $25. The interviewer then said:

> " You are currently paying $20.00 per month premium for your Fallon Senior Plan insurance. This does not include your home care services such as (.. a service that they were currently using ..) How much more would you be willing to pay per month if those services were included as part of your Senior Plan benefits? Would you be willing or not to pay an extra....

TABLE 32 EXPERIMENTAL AND CONTROL GROUP MEMBERS' CHOICES OF THE THREE MOST IMPORTANT SERVICES, FOUR MOST IMPORTANT EXPENDITURES

	Experimental n=32		Control n=23	
a) Three Services Considered To Be Most Important		(n)		(n)
	Homemaker	(12)	Homemaker	(13)
	Personal Care	(9)	Personal Care	(4)
	Meals	(7)	Meals	(4)
	Transportation	(3)	Home Health Aide	(1)
	Chore	(1)	Transportation	(1)
	Companion	(0)	Companion	(1)
b) Four Most Important Things Respondents Spend Money On				
	Food	(30)	Food	(21)
	Rent	(20)	Telephone	(12)
	Utilities	(19)	Rent	(11)
	Telephone	(15)	Utilities	(11)
	Insurance	(11)	Clothing	(8)
	Clothing	(4)	Taxes	(6)
	Taxes	(3)	Insurance	(3)
	Health	(2)	Care	(2)
	Recreation	(1)	House Upkeep	(2)
	Transportation	(1)	Health	(1)
	Medicine	(1)	Medicine	(1)
c) Number of Respondents Including Food				
Yes	30 (93.8)		21 (91.3)	
No	2 (6.2)		2 (8.7)	
c) Number of Respondents Including Rent				
Yes	20 (62.5)		11 (47.8)	
No	12 (37.5)		12 (52.2)	

TABLE 33 EXPERIMENTAL AND CONTROL GROUP MEMBERS' WILLINGNESS TO PAY FOR SERVICES AND ESTIMATED COST

	Experimental		Control	
	$	n	$	n
a) Homemaker Services				
Estimated cost per hour	7.73	11	6.11	9
Willingness to pay per hour	9.67	6	6.50	2
b) Personal Care Services				
Estimated cost per hour	7.57	7	4.33	3
Willingness to pay per hour	15.00	2	-	
c) Companion Services				
Estimated cost per hour	-		-	
Willingness to pay per hour	-		-	
d) Chore Services				
Estimated cost per hour	8.50	2	5.50	2
Willingness to pay per hour	-		-	
e) Home Health Aide				
Estimated cost per hour	12.00	1	-	
Willingness to pay per hour	-		-	
f) Meal Services				
Estimated cost per meal	2.00	9	1.11	8
Willingness to pay per meal	2.00	6	-	
g) Transportation				
Estimated cost per trip	4.50	2	-	
Willingness to pay per trip	-		-	
h) Social Day Care				
Estimated cost per day	-		-	
Willingness to pay per day	-		-	

TABLE 34 EXPERIMENTAL AND CONTROL GROUP MEMBERS' WILLINGNESS TO PAY FOR SOCIAL SERVICES

	Experimental n=31		Control n=23	
	#	%	#	%
a) Willingness to Pay Per Month If Social Services Were Added to Benefits?				
$ 5	3	(9.7)	2	(8.7)
$10	12	(38.7)	7	(30.4)
$15	4	(12.9)	3	(13.1)
$20	3	(9.7)	2	(8.7)
$25	3	(9.7)	1	(4.4)
Other	2	(6.5)	5	(21.7)
Not willing to pay for services	4	(12.9)	3	(13.1)
b) Willingness to Pay Per Month for Services	n=10		n=4	
mean	$46.07		$50.00	
range	$10 - $100		$15 -$100	
c) Preferable Payment Plan	n=30		n=23	
Higher premium	13	(43.3)	9	(39.1)
Current premium + fee	6	(20.0)	7	(30.4)
Lump sum	-		-	
Cannot determine	9	(30.0)	5	(21.7)
Not important	2	(6.7)	2	(8.7)
d) Importance of Home Care Services	n=32		n=23	
It would be impossible for me to manage without the home care.	4	(12.5)	10	(43.5)
I would have to go to a nursing home.	3	(9.4)	3	(13.0)
I would have to rely on family members.	10	(31.3)	2	(8.7)
I would have to rely on others.	1	(3.1)	1	(4.3)
I could manage by myself but it would be difficult.	11	(34.4)	6	(26.1)
It makes my life easier but I could manage without it.	2	(6.3)	1	(4.3)
Can't say.	1	(3.1)	-	

p=.1478

Among the 31 members Experimental Group who chose to answer, 12 cited $10; 4, $15; 3, $20; 3, $25; 3, $5; and 4 were not willing to pay. The average for those that did respond was $13.20. Ten dollars was also the most common answer given by members of the Control Group (7); 3 said $15; 2, $20; 1, $25, 2,$5 and 3 not willing to pay. The average for them was $12.67 (Table 34).

When the question was rephrased to inquire how much they would be willing to pay for the services per month outright not as part of insurance benefits, the 10 members of the Experimental Group who responded gave amounts that ranged from $10 to $100, for an average amount of $46.07. Only 4 Control Group members answered with amounts that ranged from $15 to $100, or $50 average.

In order to put the questions and answers about payments for services into perspective, the interviewer then asked the clients to name the four most important thing that they spend their money on. When the responses were tallied, food for both the Experimental and Control Groups was mentioned more often than any other. Second in order for the Experimental Group was rent, followed by utilities and telephone. For the Control Group second was telephone, then followed by rent and utilities. The two least often cited among the top four was transportation and medicine by the Experimental Group members and health and medicine by the Control Group. No statistical differences between the Experimental and Control Groups were found when a comparison was made regarding the number of respondents who included food (93.8 percent, Experimental; 91.3 percent, Control) or rent (62.5 percent, Experimental; 47.8 percent, Control) among the top four.

The third question in the set asked the clients what payment method they would prefer if the FSP were to offer a plan covering home care services. Of the three types, the most frequent response was "higher premium" selected by 13 of the 30 Experiment Group members and 9 of the 23 Control Group members. No member of either group preferred a lump sum. Thirteen of the 30 Experimental Group clients and 5 of the 23 Control Group clients said that they could not make a determination; 6 of the former chose current premium plus a fee and 7 of the latter. For 2 members of each group, it appeared to be not important.

As a final question, the clients were given 6 statements regarding the importance of home care and asked to choose one. Although there was a difference in the pattern of responses by the Experimental and Control Group members, it was not statistically significant. Eleven of the 32 Experimental Group answered, "I could manage by myself but it would be difficult;" 10 said, "I would have to rely on family members." 4, "It would be impossible for me to manage without the home care;" 3, "I would have to go to a nursing home;" 1, "I would have to rely on others" or "can't say." Among the 23 Control Group clients, the most common response (10) was "It would be impossible for me to manage without the home care." Six answered, "I could manage by myself but it would be difficult;" 3, "I would have to go to a nursing home;" 2, "I would have to rely on family

members;" and 1 each for "I would have to rely on others" and "I could manage by myself but it would be difficult."

On the whole, clients appeared reluctant to estimate cost of home care services, perhaps because they had little experience in purchasing them. Not surprisingly, when they suggested a price, the amounts tended to be less than the actual cost. For instance, the charge to the agency for homemaker service at this time was $11.37 an hour compared to $7.73 and $6.11 estimated by the Experimental and Control group clients, respectively. Personal care services also cost $11.37 per hour, yet the estimates were $7.57 and $4.33. Two Experimental Group members suggested $8.50 per hour as the cost of chore services, which actually was $14.00; the two Control Group members said $5.50. The estimated costs for both home health aide services ($12) and transportation ($4.50) were much closer to the actual amounts ($13 and $4.80, respectively), but they involved only one or two respondents.

Among the members of both groups, food was viewed as the most important expenditure, followed by rent, utilities, insurance, clothing and taxes, with health care and medicine at the bottom of the list, testimony to the success of FSP in providing affordable medical care for its senior members. In addition to the $20 premium that they were assessed each month for the FSP at the time of the survey, clients in both study groups said that they would be willing to pay an additional $13.00 for social services. If forced to go without home care services, a sizable proportion of Experimental clients stated that they would have to rely on family or themselves. Because the Control Group members had been EHC clients and recipients of homemaker services for a longer period of time, they were more likely to say that it would be impossible for them to manage; yet, for the large majority in both groups, nursing home care was not an option.

D. EFFECTIVENESS OF THE PROJECT MODELS

Initially, two hypotheses were posed to determine the effectiveness of the project models: 1) All three models are effective for serving frail elderly members of an HMO and 2) One model is more efficient than the other two. Effectiveness was defined in terms of: organizational structure, staff composition, management procedures, communication, intra- and inter-organization coordination. Efficiency was defined as the cost in staff time of implementing the model. The "model" in this analysis refers to the clinical team, rather than the total project, although some references to the function of the overall project will be presented.

It was evident when this phase of the evaluation was undertaken that it would not be possible to compare the efficiency of the models since the three were in a different stage of development. The Worcester model had been operating for about 15 months, the northern county (Montachusett) model, 6 months; and the southern county (Tri-Valley) model, 3 months. Therefore, this segment of the analysis will be descriptive, contrasting and comparing how the teams functioned, without determining which was more efficient.

Methodology

Description of the Models

Worcester Team. The composition of the clinical team for the Worcester Project consisted of two EHC case managers who carried out the initial client assessments, a Fallon health care coordinator, a VNA nurse, and the project coordinator. They met weekly for about two hours to formulate the care plans of new referrals and to monitor the progress of earlier project admissions, usually about 30 in number. At the time of this study, the team had an active caseload of approximately 115 individuals.

Once the initial client assessment and care plan decisions were made, the project case manager transferred the case to a regular EHC case manager for on-going management. Her role was to serve as a liaison between the client's assigned case manager and the clinical team. The assigned EHC case managers also met on a regular basis to keep informed of project developments.

The health care coordinator position (utilization review nurses) on the team was divided between two staff persons. They supplied information about the hospital and nursing home admissions and approved the care plan benefits that the patients/clients were entitled to as FSP enrollees. Under a capitation agreement with the FSP, the VNA of Central Massachusetts provided home health care to plan members, except those living in one of the suburban towns, which was covered by another VNA. The Central Mass. VNA staff nurse was a permanent member of the clinical team; the other VNA sent a staff person only if one of their cases was scheduled for review.

Montachusett Team. The implementation of the Montachusett team coincided with the opening of a clinic by the Fallon Community Health Plan in the north county area. Since some time would be needed to build up an enrollment, the Montachusett Home Care (MHC) anticipated a much smaller case load in the beginning than the Worcester project. As a result, one MHC case manager was assigned to the project who did both the initial assessments and on-going case management. Most of the early case load were MHC clients who were also FSP members. One FSP health care coordinator attended all the team meetings, as well as the SHCP project coordinator. The two home health agencies in the area that had contracts with the FCHP, as well as a third that serviced the area, assigned nurses to attend the team meetings.

Tri-Valley Elder Services Team. One case manager, with responsibility for all initial case assessments and case management, was transferred to the TVS project, because, again, a much smaller case load was anticipated for the south county than had occurred in the Worcester area. One health care coordinator and nurses from two home health agencies that contracted with the FCHP completed the team.

Data Collection

Three different methods were used to obtain information about the teams' effectiveness. Firstly, all persons involved in the team process (referral, assessment, care planning) were asked to complete the Organizational Assessment Instrument (OAI) that was adapted for this study. The OAI identifies organizational characteristics that explain the effectiveness of an organization and quality of work life (Van de Ven and Ferry, 1980). The version of the OAI given to the staff asked questions relating to basic work activities and type and quality of contact with others in the agency (Exhibit 6). Secondly, those individuals involved with the project were interviewed by the evaluation director for 30-45 minutes, about the goals of the project, lines of communication, team function, achievements and barriers. These were tape-recorded and transcribed. A third source of data was the team members' daily reports of the time they spent (in one-quarter hour segments) carrying out specified activities (see Exhibit 7), both client- and non-client related.

Sample

The sample included the personnel who were mentioned previously as serving on the clinical teams. In addition, interviews and data were obtained from the supervisors of the case managers and health care coordinators. Although they were not regular members of the team, they did spend time on the SHCP as part of their supervisory duties.

Results

To provide a more complete description of the three team models, the information obtained from the interviews about team function, communication and leadership is presented first. This is followed by the data taken from the time-function charts completed by the team members and from their responses on the OAI instrument. The respondents' views of the obstacles they faced in implementation and the advantages of the program close the section.

Team Function

When asked about the goal of the SHCP, most home care and home health agency personnel replied in such terms as "coordinating medical and social care," "coordinating services," or "provides integrated care," whereas the Fallon staff tended to describe the project in more functional terms, such as "provides case management to Senior Plan members," and "enables people who did not have access to home care to have it."

With regard to team function, there appeared to be general agreement that the "team" was functioning well. At the time of the interviews, there were several differences in the three models. As mentioned earlier, the Worcester Project had been admitting patients for over a year, the Montachusett group for about six months, and the Tri-Valley group only a matter of a few months. More importantly, the case managers of the TVS and MHC clients were members of their teams. Having the person most

directly involved with the client was seen as a distinct advantage for these models. Usually, the case managers scheduled a visit to their client a week prior to the team meeting so that they would have the most up-to-date information to share with the team members. In the EHC model, the project case managers had to contact the client's case manager to obtain information that had been requested, which could cause several weeks delay. In spite of the efficiency of the MHC and TVS models in this regard, it was realized that when the case loads increased, as well as the geographic areas to be covered, it might not be feasible to continue this arrangement. One proposed solution was to have the case manager transfer some of the less troublesome cases and maintain the more complicated ones.

Another major difference was the role of the home health agencies in the TVS and MHC teams. Initially, all the agencies involved in providing service for Fallon patients were included on the team, which meant that some home health agency personnel were attending meetings without any of their patients on the agenda. Shortly thereafter, the decision was made to have the home health agency present only if one of the cases was to be discussed. In the EHC model, because only one home health agency was involved, the nurse representative was always in attendance. However, not all the clients were on the home health agency case load. However, the nurse stayed through the entire team meeting. She believed that she made a contribution to the team discussion by providing answers to medical questions and being prepared to admit a new patient if the team conference made that decision.

There was also some doubt expressed by the home health agency representatives in the north county about the value of the team conference. Most of the interviewees in the north county spoke about the strong existing linkage between MHC and the home health agencies; for them, the only new element was the addition of the Fallon as one of the members.

Team Communication

Most of the communication among the team participants was done through the team meeting, but some telephone contact was still necessary. The case manager brought information about the client to the team, in the form of the CNAP assessment and quarterly reassessments, if available. Further information on the client's status was provided by the home health agency representative. The Fallon health care coordinator's role was to clarify some of the issues related to medical and nursing care and to notify the other members what services Fallon would authorize. Having two different types of nurses, one providing services and the other authorizing them was found at times to be confusing, especially in a small proportion of cases where the case managers had wanted to increase the level of services. Also, case managers appeared to have more freedom in negotiating care plans than the Fallon health care coordinator, who could only agree to services if they conformed to specific guidelines. The fact that these guidelines were not made known to the case managers did present a point of tension between the groups.

Credit was given to the Project Coordinator by her teammates for her ability to keep the lines of communication open and to introduce issues of mutual concern to them for discussion. Most participants acknowledged that it took time for the team members to feel comfortable. The Worcester group noted that in the early months of the team meetings, there were several different people sitting in as members of the team, which altered the dynamics of the group. With the stabilization of team membership, there was more trust and openness. Again, home health agency personnel in the north county stressed the fact that there had been good communication between MHC and the home health agencies.

Team Leadership

The project director functioned as the team group facilitator, developed the agenda, helped to facilitate the group, mediated and clarified roles; and balanced the various interests. All participants acknowledged the important role she served, but believed that the team could function if no coordinator was available. In a few instances, the Worcester case managers had substituted for the project coordinator and both of them felt that the meetings had gone fairly well. Another person remarked that, under those circumstances, it would be necessary to improve the skills of the group and to have agreements among the members who they would be willing to take on the responsibilities. Most suggested a sharing of responsibilities rather than assigning them to one agency. It is interesting that several home care staff members proposed that the Fallon health care coordinator play that role, but the coordinators themselves did not suggest it.

Overall, after some "growing pains, " the teams appeared to be functioning satisfactorily with little difficulty in reaching agreement among the home care, home health and senior health plan personnel about client care plans. As was evident in the interviews, home care case managers and the home health agency nurses had been working together, both formally and informally for a long time. They were familiar with each other's role and had been advocates of service integration (although, perhaps, not as to who should lead the effort). It was not unexpected that the two groups would agree about the goal of the SHCP ("coordinating medical and social care"). Nor was it unexpected that the health plan staff would view the goal slightly different since the focus of their activities has been utilization review. In spite of the different orientations and some changes in team membership during the early months, the group believed that they had achieved a good working relationship, facilitated by the skill of the project coordinator as team leader.

Use of Time

The first question on the OAI asked the respondents to list their specific tasks and work activities related to the Senior Home Care Project, describe them, and then indicate the number of hours that they spent doing them. (Table 35). A comparison of the time estimates by the case managers shows some remarkable similarities as well as some differences. For three of the tasks, there was agreement among the case

TABLE 35 ESTIMATION OF HOURS SPENT IN ONE WEEK ON WORK ACTIVITIES FOR THE SENIOR HOME CARE PROJECT BY CASE MANAGERS

	EHC-1	EHC-2	TVS	MHC
	hrs.	hrs.	hrs.	hrs.
Paper work/statistics	11	11	10	10
Home visits	10	5	10	9
Telephone contact	6	-	9	1
Consultation	8	14	-	-
Meetings	2	2.5	2	3
Supervision/inservice	-	2	2	3
Travel	-	-	4.5	5
Total	37	34.5	37.5	31

TABLE 36 ESTIMATION OF HOURS SPENT IN ONE WEEK ON WORK ACTIVITIES FOR THE SENIOR HOME CARE PROJECT BY HOME CARE SUPERVISORS

	EHC	TVS	MHC
	hrs.	hrs.	hrs.
Supervision	4	2.3	2
Meetings/travel time	1.5	1.5	1.5
Paperwork/record review	2	2.5	5
Total hours	7.5	6.3	8.5

managers of the three models on the hours spent: in paper work and statistics (10-11); meeting time (2-3); and supervision (2-3). Each site's case manager also noted spending between 9-10 hours on home visits and assessments. The second case manager at EHC said she spent 5 hours. The differences among the three models were in travel time, which consumed about 5 hours of time for both the MHC and TVS case managers but was not listed by either EHC staff person, and consultation time which was not listed by the MHC and TVS personnel but which occupied 8 hours for one EHC case manager and 14 hours for the other. On the other hand, the MHC and TVS included telephone time (9 hours for the former and 1 hour, the latter) which was not considered a separate task by the EHC staff.

The home care supervisors included three tasks, but disagreed as to the amount of time given to each (Table 36): supervision , which ranged between 2-4 hours per week; paper work and record review, 1.5 - 3 hours a week; and meetings, including travel time, 1.5 hours for EHC, 5 for MHC, and 2.5 for TVS. For the home health agency representatives to the teams, there were two primary functions: the first was described as case review/team meetings and the second as resource/referral. The EHC VNA nurse spent 3 hours per week on case review and team meetings with no travel time listed and 2 hours as a case resource. The two nurse supervisors participating in the MHC team spent between 2.0 and 2.5 hours per week on the team meetings including travel time and about one-half hour as a resource/referral person. The nurse for the TVS team who responded to the survey included 2.5 hours in the team meeting and 1 hour for travel (Table 37).

The tasks listed by the Fallon health care coordinators included discharge planning, team meetings, administrative meetings, telephone and intake, screening referrals, supervision, and information sharing for a total of 36.5 hours, of which 12.5 were listed as "team meetings" (Table 38). For the project coordinator, paper work (6-10 hours) and clinical team meetings (6-7 hours) were the most time consuming, followed by telephone communication (Table 39).

The time-function analysis becomes a little clearer in Tables 40-44, which were compiled with data from the daily report forms completed by the staff for a four week period. The purpose was to determine time allocation among the various functions by project personnel in the three models. According to table 40, which records the data on time use by the case managers by site, both the TVS and MHC case managers spent considerable more time with each client than reported by the EHC case manager. There was fairly close agreement in the proportion of time allocated to case recording, assessment, travel and consultation between TVS and MHC. On the other hand, the EHC casemanager recorded a greater portion of time providing consultation, and less in travel; the latter also spent considerably more time (9.4%) in clinical team activities than either the TVS case manager (5.4%) or the MHC caseworker. Such a small proportion of time would indicate that she might have assigned some aspects related to the clinical team to another category. Another major difference among the three models is the amount of time spent in non-clinical activities with the EHC staff devoting 30% of their time whereas

TABLE 37 ESTIMATION OF HOURS SPENT IN ONE WEEK ON WORK ACTIVITIES FOR THE SENIOR HOME CARE PROJECT BY HOME HEALTH AGENCY REPRESENTATIVES

	EHC	TVS	MHC-1	MHC-2
	hrs.	hrs.	hrs.	hrs.
Team meeting/resource	3*	2.5	2.0**	1.5
Travel	-	1.0	-	.5
Case review/resource	2	-	.5	.5
Total hours	5	3.5	2.5	2.5

*includes time spent as a resource for team and VNA staff
**includes travel time

TABLE 38 ESTIMATION OF HOURS SPENT IN ONE WEEK ON WORK ACTIVITIES FOR THE SENIOR HOME CARE PROJECT BY FALLON HEALTH CARE COORDINATORS

	CH	NL	KL	ES	JB	MD
	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
Team meetings	4.5	3	5	-	-	-
Discharge planning	2	-	-	-	-	-
Administrative meetings	2	2.5	-	-	-	-
Telephone/intake	1	-	1	2.5	-	-
Screen referrals	-	2.5	2	.5	.5	1
Supervision	-	3.5	-	-	-	-
Information sharing	-	2.5	-	-	.5	-
Total hours	9.5	14.0	8	3.0	1.0	1

TABLE 39 ESTIMATION OF HOURS SPENT IN ONE WEEK ON WORK ACTIVITIES FOR THE SENIOR HOME CARE PROJECT BY THE PROJECT COORDINATOR

	Coordinator
	hrs/wk
Paperwork	6-10
Clinical team meetings	6-7 (includes travel)
Telephone	4-5
Program administration	2
Presentations, speeches	1-2
Public relations	1-2
Information/referral	1

TABLE 40 TIME USE BY SHCP CASE MANAGERS BASED ON TIME SHEETS FOR A FOUR WEEK PERIOD

	EHC*	TVS	MHC
Client-Related			
# clients	34	38	43
Total hours	85.25	121.25	103.75
Average (hrs/client/mth)	1.86	2.8	2.3
Range (hours)	0.25-8.0	0.25-7.5	0.25-5.75
	%	%	%
Case Recording	34.0	23.3	23.4
Assessment	23.4	26.4	30.9
Travel	10.0	19.2	16.6
Consultation	10.0	5.8	3.1
Clinical team	9.4	5.4	1.5
Telephone	7.6	9.1	11.6
Screening	2.9	0.8	9.4
Agency contact	2.6	5.2	1.0
Other	-	5.0	2.7
Non-Client Related			
Total hours	34.75	12.5	17.75
	%	%	%
Training/education	53.2	28.0	8.5
Program administration	37.4	2.0	11.3
Staff meetings	1.4	40.0	5.6
Agency relations	0.7	28.0	-
Case finding	-	2.0	9.9
Other	7.2	-	64.8**
TOTAL HOURS	120.00	133.75	121.50

*Although the EHC had two case managers assigned to the project, one transferred out part-way through the time study. Therefore, data represent the report of one full-time case manager at each site.

**11.50 hours spent in doing agency intake as well as project paper work.

the other two agency case managers gave about 10%, but not generally doing the same tasks.

Among the home care supervisors, there were variations both in the amount of time as well as its distribution, with the EHC devoting the least number (even when adjustment is made for the fact that the time sheets covered 3 weeks instead of 4). For the EHC supervisor, the greater amount of time was given over to non-client related tasks whereas for the TVS and MHC it was client related activities (Table 41).

Another difference in the functioning of the models is the amount of time spent by the home health agency personnel assigned to the teams. Here, the comparison is between the EHC and MHC programs. The home health agency staff person assigned to the EHC team gave 19 hours over a 4 week period) compared to the TVS home health agency nurse, who spent 4.58 hours. The focus in both the staff time sheet reports is on client-related activities. The home health agency nurse in the EHC model allocated 11 hours to the clinical team, compared to 3/4 of an hour by the TVS nurse (Table 42).

Time utilization data for the Fallon staff varied by function of the staff, ranging from about 1.5 hours for a staff member making a referral to 33.58 hours for the health coordinator who served as a member of the EHC team (Table 43). A comparison of the time spent by the Project Coordinator shows about 14 percent in client related tasks, of which half of that relates to team operations and the remaining to non-client activities, primarily program administration (Table 44).

In summary, two methods were used to examine how project personnel use their time. The first, based on an estimate of time spent per activity for a one week period, revealed quite clearly the differences in the models: the most obvious was in the case manager's role in the Worcester project, which involved more "consultation" than direct case management as was carried out by the north and south county project case managers; the travel time required by persons working in the north and south county agencies; and the greater volume of cases in the Worcester Project as reflected in the additional time involvement of the health care coordinators.

The second method utilized the actual amount of time spent over a four week period, calculated on a per client basis. Again, the difference was clear with a greater proportion of the Worcester model case manager time given to non-client related activities, less to travel and more to team meetings. The distinction between the Worcester and north and south county models was evident in the amount of time that the home care agency supervisors reported that they spent on this project: a relatively small amount by the Worcester case manager supervisor, a considerable amount by the MHC supervisor and still more by the TVS supervisor. The greater time involvement of the TVS supervisor was no doubt due to the fact that to fill the position of case manager, the EHC and MHC transferred case managers, whereas TVS hired a person new to the agency, the position of case manager, and the project.

TABLE 41 TIME USE BY SHCP HOME CARE SUPERVISORS BASED ON TIME SHEETS FOR A FOUR WEEK PERIOD

	EHC*	TVS	MHC
Client-Related			
Total hours	2.25	15.00	11.00
Non-Client Related			
Total hours	6.00	4.50	2.50
Training/education	3.00	1.50	-
Program administration	-	2.75	2.50
Staff meetings	1.00	-	-
Agency relations	1.00	-	-
Other	1.00	.25	-
TOTAL HOURS	8.25	19.50	13.50

*EHC supervisor collected data for 3 weeks instead of 4.

TABLE 42 TIME USE BY SHCP HOME HEALTH AGENCY NURSES BASED ON TIME SHEETS FOR A FOUR WEEK PERIOD

	EHC	TVS
Client-Related		
Total hours	15.00	4.58
Clinical team/assessment	11.00	.75
Consultation	1.50	-
Agency contact	1.00	-
Telephone contact	.92	-
Screening	.58	-
Travel	-	.83
Other	-	3.00
Non-Client Related		
Total hours	4.00	-
Case finding/identification	1.00	-
Training/Education	.75	-
Agency relations	.50	-
Other	1.75	-
TOTAL HOURS	19.00	4.58

TABLE 43 TIME USE BY FALLON SHCP HEALTH CARE COORDINATORS BASED ON TIME SHEETS FOR A FOUR WEEK PERIOD

	CH	NL*	KL	ES
Client-Related				
Total hours	-	2.50	21.33	1.50
Clinical Team	-	1.50	15.50	.67
Travel		1.00	5.83	-
Other	-	-	-	.83
Non-Client Related				
Total hours	3.50	20.00	12.25	-
Case finding/identification	-	8.75	12.25	-
Program administration	-	5.50	-	-
Training/education	-	3.50	-	-
Staff meeting	-	.75	-	-
Agency relations	-	.50	-	-
Other	-	1.00	-	-
TOTAL HOURS	3.50	22.50	33.58	1.50

*Data collected for 3 weeks instead of 4 (vacation).

TABLE 44 TIME USE BY SHCP COORDINATOR BASED ON TIME SHEETS KEPT FOR A FOUR WEEK PERIOD

	Coordinator	
Client-Related	#	%
Total hours	17.75	100.0
Clinical team/assessment	9.00	50.7
Travel	3.25	18.3
Case recoding/correspondence	3.00	16.9
Agency contact	1.50	8.5
Screening/referral	.75	4.2
Consultation with supervisor	.25	1.4
Non-Client Related		
Total hours	110.50	100.0
Project administration	34.00	30.8
Training - receiving	22.00	19.9
Staff meetings	17.25	15.6
Travel	5.75	5.2
Training - providing	5.50	5.0
Agency relations	5.50	5.0
Other	20.50	18.6
TOTAL HOURS	128.25*	

*Data collected for 3 weeks instead of 4 (conference, vacation)

Quality of Work Life

The next series of questions related to worker satisfaction, operating rules, work loads, and worker control. Responses to these questions are reported by site, first for the home care staff (case managers and supervisors), then for the home health agency staff, and finally for the Fallon personnel. When asked how often the same work methods or steps for the doing the major tasks from day to day were followed, the responses of the EHC and MHC team personnel was positioned between "quite often" and "very often". The Fallon group responded "quite often" and the TVS team reported, "about half the time." In answer to a similar question regarding the extent that standard operating procedures were following in carrying out the major tasks in the previous three months, the EHC staff's rating was half way between "great extent" and "very great extent". The Fallon response was slightly more than "great extent" while the MHC rating was midway between "some extent" and "great extent."

There was a similar variation in answers to the question dealing with how many written rules and procedures exist for doing the major tasks, with TVS staff indicating that they have between a "moderate" to a "large number" of rules; EHC, "a moderate number"; MHC, "a small number"; and Fallon somewhat less than "a small number" but more than "very few." The order of responses to the question dealing with the preciseness with which the rules and procedures specify how the major tasks were to be done among the four groups was similar to the previous question, with the highest rating given by the TVS staff, between "quite" and "very" specific and the lowest for the Fallon group, which was a little bit better than "mostly general."

There were some differences among the four groups with regard to the ratings of the work load. The TVS staff rated the work load to be half way between "hard to keep up with" and "entirely too much for me to handle;" next highest was the Fallon ratings with "just about the right amount"; the MHC team was slightly less than "just about the right amount" while the EHC scored the question at the midpoint between "sometimes not enough to keep me busy" and "just about the right amount."

To the question of "how far in advance do you generally know how much work will be required of you?", TVS personnel responded, "about a week in advance," the EHC staff, a little less than "a week in advance"; and both the MHC and Fallon groups, "a couple of days in advance." The last question in the series had to do with how much control the staff person had in setting the pace of the work. EHC and MHC personnel answered between "some" and "quite a bit;" the TVS staff, less than "some" but more than "very little," whereas the Fallon group was more apt to answer "very little," than "some."

Two questions dealt with coordination. The first asked the staff to note during the previous 3 months the extent to which they had experienced problems in coordinating activities "between you and project members." Both EHC and TVS personnel responded, "to no extent." The rating of the

MHC staff was slightly less than a "little extent;" and the Fallon group score was between a "little" and "some extent." The second question asked about the extent to which problems had been experienced in the previous 3 months with people outside of the project. Again, the TVS staff replied, "to no extent." Both the MHC and Fallon group ratings were not quite on a "little extent;" and the EHC personnel, slightly more than "a little extent."

In general, the workers scored their respective work environments fairly high with regard to the consistency of methods for carrying out major tasks and the frequency with which standard operating procedures were followed. A somewhat lower (moderate) rating was given by EHC and TVS workers when asked about the existence and precision of written rules and procedures for the major tasks, while MHC and FSP both acknowledged that the number of written rules was limited, and for FSP, not very precise. With respect to the work loads, there were variation in the responses, which might be expected because of the different stages and staffing of the projects. Both MHC and FSP found the work load to be just about right; the EHC workers, stated that the work load was somewhat less than the "right amount" and for the TVS staff, it was "hard to keep up with." The EHC and MHC staff seemed to have a little more control in setting the pace of their work than the TVS and FSP staff. Lastly, coordination either with persons in the SHCP or with others outside the SHCP presented very little, if any, problems to the staff.

Obstacles to Implementation

In none of the sites were there obstacles that seriously affected implementation of the project. Yet, staff members did cite a number of items when asked to comment. Initially there was a certain level of distrust between the home care and Fallon representatives. The home care personnel to some degree resented neither being able to negotiate the amount of health services with the health care coordinators nor being informed of the cost guidelines under which they operated. On the other hand, the health care coordinators were thwarted in their desire to develop the most effective care plan for their patients by the lack of available homemaker, chore, and respite services. As one person put it, "The home care corporation sees Fallon as business-oriented and Fallon sees the home care as ineffective in the face of shortages." For the Fallon administration, the lack of control over the social service vendors was also frustrating.

Travel time and the number of meetings were issues of concern to the home health agency personnel in north and south county in the first few months of the project. With the decision to have the nurses present only if they were involved in a case presentation, those concerns became less serious. One home health agency representative noted that there is no reimbursement to the home health agency for the time spent by the nurses at the team meetings. The major obstacle in the beginning, however, was the lack of understanding of the roles of each of the participants.

Advantages of the Program

A number of advantages have been cited by the project staff members. Perhaps, one of the most significant was the increased physician awareness of community services. One case worker put it this way:

> "What [we] hoped to do was to improve communication between the doctor and the social workers, and make them more aware of what's out there in the community. And I think it's worked. We're seeing more referrals from doctors.. one of the beautiful things about the team is that we can get that medical input from the health care coordinator who will make contact with the doctor and you know just what is going on .. it's been a profitable learning experience."

Greater understanding of how the various agencies work was cited by many of the respondents as a very positive outcome of the project. They also believed that because of the project many clients had been served who would not have been identified through the traditional service system procedures. Others cited the experience of "integrating health and social services," particularly in demonstrating how social services can support the medical needs of the patients to have been especially worthwhile.

IV. SUMMARY AND CONCLUSIONS

Before drawing any conclusions from these findings, it might be helpful to review the origins, purpose and findings of the evaluation. The Senior Home Care Project was one of several demonstration sites funded by the Massachusetts Executive Office of Elder Affairs to test the feasibility of integrating social and health services for community dwelling older people who were members of HMOs. Participating in this demonstration were the Fallon Senior Plan, Elder Home Care Services of Worcester Area and the VNA of Central Massachusetts.

This evaluation took place during the second and third years of the project, after 12 months had been spent in developing the organizational structure, refining the protocols, establishing the data base, and admitting the first 50 clients. Although the funding for the SHCP was to continue for three years, the actual project plan was based on activities specified for a one year period only, re-negotiated at the end of each year. With the approval of each year's plan and budget, the projects were modified to reflect the experience of the preceding year. While this state of affairs did not affect those parts of the evaluation concerned with the clients, it did in a sense make the findings related to the effectiveness of the models obsolete.

Methodology

Because of a very limited amount of funds for the evaluation as well as restrictions imposed by EOEA on random assignment of clients to the SHCP, a scaled down version of the original evaluation plan was implemented. Four research questions formed the framework of the study:

the first examined the impact of the SHCP on the clients' status; the second, the influence on utilization of health and social services; the third, the effect on clients' satisfaction with the services and willingness to pay for them; and the fourth analyzed the effectiveness of the model.

To measure the impact on the clients, their utilization of services, and their willingness to pay/satisfaction, a quasi-experimental pre-post design was selected which compared 50 Experimental Clients (enrolled in the SHCP) with 50 Control Clients (persons receiving EHC services who happened to be members of the FSP) over a six month period. Because some participants were discharged from the study prior to its close (e.g., institutionalization; improvement, death) or did not want to be interviewed, the sample for the various phases of the study was not complete except for service utilization data which was obtained on all 100 participants. A clinical team composed of a EHC case manager, FSP health care coordinator, home health agency nurse, and SHCP project coordinator, together were responsible for the development of the care plan and supervision of the case management of the Experimental Group. The Control Group clients were handled in the usual way. Each was assigned a case manager who was responsible for the care plan and case management with the approval of the home care supervisor. Contacts with the health care system, and vice-versa, were left to the judgment of the professionals working on the case. In effect, the experiment in this study was the coordination-integration provided through the clinical team.

Results

Impact on the Clients

The chi-square and t-test analyses produced the following results:

1. At admission, the Experimental and Control Groups were alike on all variables except financial status and transportation. For the purposes of the study, the income eligibility requirement had been waived to allow some FSP members who were over the income level to be participants in the SHCP. Nine of the Experimental Group were in this category. Since the Control Group was formed from existing EHC cases, its members had met the income eligibility requirement so that none of them were in the over-income category.

   According to the home care staff, the assessment of a client's ability to use transportation not only included the physical/cognitive ability to arrange or use the service but also "access" to it, (e.g., the availability of an automobile, taxi, or driver, etc.) It is the latter factor that might explain why the Experimental clients, a more affluent group, were better able to manage transportation than the Control Group clients even though there were no statistical differences in their ability to carry out other activities.

When the IADL ratings were scored and subjected to t-test analysis, there was a significant difference between the two groups: the Control Group was associated with greater impairment. Most of this difference can be traced to "transportation," and perhaps two other variables which were slightly over the $p<.05$ level: "taking medications" and "money management."

2. Three months after admission, the two groups were still alike in their ability to carry out ADLs and IADLs, except, again, for transportation, which continued to be generally more manageable for the Experimental Group. At this point in time, the overall IADL scores of the two groups were also not significantly different. A comparison of the change scores for the two groups between function at admission and three months later for each activity also showed no statistical differences.

3. Approximately six months later, the two groups again exhibited no variation in their functional ability as measured on ADL and IADL activities, except for transportation. or in the overall mean ADL and IADL scores. However, when comparing the change in ADL scores from admission to study end (about six months), there was a significant difference between the two groups in the ability to "transfer from bed/chair" and almost a statistical finding for "getting around inside." In both cases, the ability of the Control Group declined and that of the Experimental Group improved. No differences were found in the amount of change between admission to the study and six months later for the IADLs.

4. One year later, the clients remaining in the study (and for whom there annual assessments had been completed) were similar on all variables, except with regard to transportation. Again, the Control Group exhibited greater dependence in this activity.

5. At the end of the six month period, except for greater homemaker service associated with the Control group, there was no difference in the amount of social or health services authorized per month or total units delivered for the two groups. In terms of the actual utilization, the Experimental Group exceeded the utilization figures of the Control Group for some community based services (companion, social day care, home health aide, physical therapy and acute hospital days); and vice versa, the Control Group used more homemaker/personal care, companion, skilled nursing and meals. Other service units (chore, home health aide, FSP clinical visits, and nursing home days) were about the same.

Although costs were not estimated, it is reasonable to state that for this group of clients, the cost of Experimental Group services exceeded that of the Control Group, because the former used twice as many of the more expensive acute hospital days. However, since the hospital days were not statistically

different, this added cost for the Experimental Group cannot be considered a negative effect of the program.

6. With regard to their expectations of using home care in the future, the Experimental Group was more likely to say they could not predict or that it would be less than six months whereas the Control Group members expected to use the services for "the rest of their life."

7. A majority of the clients in both groups were very or mostly satisfied with the amount of help and services they received and rated the quality as "good." Both groups agreed that a homemaker was the most important EHC service in helping them remain in their own homes.

8. Estimation of the cost of services by the two groups and the amount they would be willing to pay were generally below the actual cost. A larger proportion of both groups selected a "higher premium" as the preferable payment plan if social services were to become part of the HMO benefit package, and proposed $13.00 as the added monthly payment.

Effectiveness of the Clinical Teams

In addition to the research questions on the impact of the SHCP on the client and his/her use of services, the evaluation also examined the structure and function of the clinical teams that were operating in the central, north and south county. The basic team membership as mentioned earlier included a case manager, FSP health care coordinator, home health agency representative, and program coordinator. Data for this portion of the study were obtained from an organizational assessment instrument completed by the team participants, daily reports by the team participants for a four week period on how they spent their time, and face-to-face interviews. They produced the following results:

1. After an initial period of some tension, traced to a lack of understanding of roles and to different perspectives, the members of the teams were able to reach a consensus on care plans and case management amicably and efficiently.

2. The Project Coordinator played a critical role in creating a positive climate for communication and agreement among the participants of the teams; yet, the team members believed that, if necessary, they could function without a coordinator by increasing their own skills in team function and leadership and by sharing responsibilities.

3. The three models (Worcester, Montachusett, and Tri-Valley) represented two different types, distinguished mainly by the role of the case manager, the home health care representative, and case load. The Worcester team case managers carried out the initial case assessment and then turned over the case to another

EHC staff person for on-going case management. Consequently, they served in more a liaison capacity than the case managers in the other two teams, who did the initial case assessments and the on-going case monitoring. Because FSP had a contract based on capitation with the VNA of Central Massachusetts, the nurse representative was present at all team meetings which gave more continuity and cohesiveness than could be achieved by the Montachusett and Tri-Valley teams, whose several different home health agencies attended only when one of their patients was involved.

4. The difference in function of the case managers was also evident in the time-function analysis which indicated a greater proportion of time spent by the Worcester case managers in consultation and non-client related activities and much less in travel than their counterparts on the Montachusett and Tri-Valley teams.

5. The home care and HMO team members were enthusiastic about the project, believed in its goal, and were dedicated to making it work. Among the advantages they cited were greater knowledge of how each other's agency functions and better understanding of the value of having an integrated health and social service program. They were convinced that the project had identified some clients in need of services who would not have been served otherwise and had been responsible for increasing the awareness of FSP physicians to the available community services.

Discussion

It is clear from these results that in terms of affecting the functional, mental/emotional, or social status of the clients, the "experiment" had no effect. The two groups were extraordinarily alike at admission and at 3,6 and 12 months later. The difference between the two groups that appeared at admission, financial status and transportation, continued to differentiate the two groups throughout the test period. Several reasons can account for the lack of impact. The first could be simply that the coordinated planning and case management are not critical aspects of intervention. Secondly, the changes that occur with an integrated approach to service delivery may be too subtle, the instruments used to measure them, too crude, and the statistical tests, not sensitive enough.

A third reason may be that the case managers of the Control clients have done an effective job in communicating with their health care providers. Over the years, the EHC and VNA have cooperated in a number of projects so that each is very much aware of what the other does and can in an informal way integrate their services. Although only a small proportion of the EHC clients during this period were participants in the SHCP, information about the cooperative project with the FCHP was known to the staff and might have encouraged them to be in closer contact with

the medical service providers than might have occurred before the initiation of the project. Prior to the beginning of this project, EHC had assigned a case manager to each of the hospitals, including the one which served FSP members, to assist the discharge planners with screening their patients for admission into the EHC program. To some degree, then, integration of services was taking place even without the clinical team.

Not only did the SHCP have no effect on the status of the participants, but it also made no difference in the amount of health and social services authorized or utilized by the two groups, except for homemaker services, which was used in significantly greater amount by the Control Group. Unlike the Experimental Group, the participants in the Control Group had been clients of EHC prior to the initiation of the SHCP and had been receiving homemaker services. One of the underlying assumptions of this program was that through integration of social and health services, it would be possible to substitute the lower cost social services for the higher cost health care. These findings do not support this supposition. Sample size was a distinct limitation of this portion of the study since very few clients used the services, other than homemakers, skilled nursing, and clinical visits. Even setting the probability level at $p<.10$ would have only produced significant results for one additional service, meals-on-wheels, with the Control Group having a larger number authorized per month.

Despite the statistical similarity of the two groups there were certain indications that their differences went beyond financial status or access to transportation. The most revealing was the reason given for exit from the study. Six of the Experimental Group died compared to one of the Control Group, which suggest that the members of the Experimental Group may have been more acutely ill than the Control Group. Morbidity was not captured in the CNAP assessment instrument which mainly focused on function. Although a question was included about the existence of medical conditions, their seriousness was not rated. Further evidence that the Experimental Group might include persons suffering from an acute episode rather than a chronic problem is that fact that five members of this group left the study because their condition improved, but none of the Control Group left for that reason. The finding that nine members of the Control Group, but none of the Experimental Group were institutionalized in the six month period, lends additional support to the proposition that the Control clients were a more chronically ill group and the Experimental Clients a more acutely ill group. Similarly, the response to the question regarding future use of home care suggested that the Experimental Group viewed the home care as a more temporary measure while the Control Group, who had been home care users, perceived it as a needed service for the rest of their lives.

One of the objectives of the interviews with the clients was to determine their receptivity to paying for home care services as part of the benefit package of the FSP. Generally, most of the clients in the study, in either group, had not purchased home care services directly, were unaware of the cost of them, and were unwilling to estimate the cost. Yet, they did express a willingness to pay a monthly fee if social

services were added to the benefit package, and some suggested an amount. Shortly after the data was gathered, the monthly premium for a FSP member, which was very reasonable and competitive, was increased 75%, to a sum greater than the average payment that the groups had recommended for the social service benefit. Again, because the sample size was so small, there were, except for homemaker, transportation, and meal service, relatively few users of services, and, thus, few clients to inquire concerning their perception of cost.

As was alluded to earlier, the SHCP was in continual process of development and refinement during the project period. Even while the data on the organizational models were being collected, several changes were being planned and implemented shortly thereafter. In the face of increasing number of clients and recognition that some required more attention than others, a process was implemented by the Worcester model to categorize the eligible clients into "acute" and "chronic" categories with more team attention focused on the former. The Montachusett group began screening for a "medically at risk" group to determine whether "preventive care" might delay the need for acute or chronic care. A later effort begun in the fourth year was the addition of a FSP primary care nurse to the clinical team who would identify potential home care clients, implement and monitor clients medical care plans and provide medical information for the CNAP assessment process. Whereas the health care coordinators used patient records on which to base their judgments, the primary care nurse would have, as the case managers, direct knowledge of the patient.

Implications

Although project development is still in a state of flux, the results of the study described in the preceding pages do have some implications for future efforts. The fact that the clinical team (the integrating-case management unit) had virtually no effect on the physical, cognitive, and social status of the clients and their utilization of services raises a serious question concerning the benefits of the SHCP as it was designed. It may be that the lack of discrete findings can be traced to some methodological limitations, particularly the small sample size. On the other hand, reviews of 30 years of research have generally concluded that community care demonstrations based on case management as strategies for reducing cost and improving client status are of little benefit except with regard to patient and caregiver satisfaction; in fact, they have been shown to raise overall utilization and costs (Kemper, Applebaum, and Harrigan, 1987; Weissert et al., 1988). The value of case management as an effective means of controlling costs and managing services in an HMO has not been investigated widely although a preliminary survey reported by Polich and Iversen (1987) disclosed no relationship between HMO plan's perceived financial success or failure with its risk contract to the presence of a case management program.

If the team effort did not result in greater savings for the FSP or better function for the clients, it did lead to greater understanding and knowledge among the team members about the functions, roles, and resources

of the participating agencies. James Callahan (1988) takes the position that "if service providers do a better job in making their services known and take more responsibility for their customers, there may be less need for case management." With the acquired information and skills from the experiment, the team members may be better able to carry out their duties without coming together as a team for joint decision making, except to deal with the most problematic cases. There are certain indications that the SHCP project is going in this direction. The Worcester model is focusing its team meetings on those cases that are considered "acute," and the Tri-Valley model has reduced the number of team meetings from weekly to twice monthly.

Because HMOs focus on integration, coordination and cost, they are potentially powerful models for the delivery of long-term care services. The early utilization and cost experience of the National SHMO Demonstration has shown that use of hospital and chronic care services has been near capitation estimates (Greenberg et al., 1988). In spite of the absence of positive findings, the concept of the SHCP does hold promise. The larger demonstration of the Massachusetts Executive Office of Elder Affairs of which the SHCP is a part will provide additional data and information from the several other sites. Comparing and contrasting the different versions of the HMO-home care corporation models should provide further insight about the concept and how the various models can be modified for successful implementation. Certainly, before final decisions are made about their effectiveness, more rigorous testing should be done.

Future undertakings of this nature should include a randomized sample of sufficient sample size to examine sub-groups, multivariate analyses to control for baseline differences and sample attrition, data instruments that adequately measure severity of the medical conditions in addition to functional status, longer study period, and cost analyses, not only for the services but the project and team administration (case management).

With more adequate cost data available, contracts might be developed between the HMO and the home care corporations, to provide a certain package of social services, similar to those that presently exist between the FCHP and the home health agencies. An important question to be answered would be whether the contract should be on a per capita basis or fee-for-service? More attention will have to be given to selecting the criteria for client eligibility and to ascertaining which clients benefit the most from programs of this type. The approach to case management will need further analysis. Is the clinical team as described here the most efficient method?

Although this study of the clients' perception of the social services and costs were limited in size of the sample and length of stay, it did confirm what other research has shown: that older people and their families lack knowledge about long-term care services, their availability and their cost. Educating plan members about community-based social services would be a crucial element in marketing an expanded FSP plan.

As the numbers of very old people in the population grow, there will

have to be ways of linking the acute care and chronic care systems. More information and testing will be necessary to create programs that are cost effective and at the same time provide quality care. The HMO-home care corporation experiment is one model that may help furnish some of the answers. It deserves further attention.

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APPENDIX

EXHIBIT 1

MASSACHUSETTS HOME CARE PROGRAM CLIENT NEEDS ASSESSMENT

Circle All That Apply:

1 — Protective Services
2 — 2176
3 — CCC
4 — Respite
5 — Congregate
6 — Cross Reference

Intake Date _____

Date of Assessment _____

Where? _____

Home Care Agency _____

Client ID # _____

Casemanager _____

FUNCTIONAL IMPAIRMENT LEVEL

Level _____

Date _____

_____ Baseline Priority Category

KEY FACTS

1. Name _____
2. Address _____
   Town/City _____
3. Telephone # _____
4. Social Security # _____
5. English Spoken: Yes No
   Principal Language if not English:
   _____
6. Sex: 1 – Male 2 – Female
7. Date of Birth _____
8. Marital Status:
   1 – Single
   2 – Married
   3 – Widowed
   4 – Divorced
   5 – Separated
9. Lives With: (circle one)
   1 – Alone
   2 – Spouse
   3 – Spouse & Family
   4 – Family
   5 – Non-Family
   6 – Family/Non-Family
10. # Clients in Household _____
11. EMERGENCY CONTACTS.
    a. Name _____
    Address _____
    Town/City _____
    Relationship _____
    Telephone # _____
    b. Name _____
    Address _____
    Town/City _____
    Relationship _____
    Telephone # _____
12. 1 – Legal Guardian 2 – Conservator 3 – Payee: Name _____
13. MEDICAL RESOURCES.
    Hospital _____ Telephone # _____
    CHHA _____ Telephone # _____
    Primary Doctor _____ Telephone # _____
    Other Doctor _____ Telephone # _____
    HMO _____ Telephone # _____
14. FINANCIAL CATEGORY:
    ☐ Income Eligible
    ☐ SSI/OAA, DA, AB (circle one)
    ☐ Sliding Fee Amount _____
    Annual Income _____
15. Health Care Coverage:
    ☐ Medicare # _____
    1 – Part A 2 – Part B
    ☐ Medicaid # _____
    ☐ Medex 1 2 3 # _____
    ☐ Other _____
16. Source of Referral: _____
17. Reason for Referral: _____
    _____
18. Type of Response: 1 – Crisis 2 – Rapid 3 – Routine
19. Other Pertinent Key Facts: _____
    _____
    _____

BEST COPY AVAILABLE

Client Name _____

ID # _____

SECTION A: PHYSICAL HEALTH

1. Self rated health: (Circle One)
   1 – Excellent 2 – Good 3 – Fair 4 – Poor

   Compared to 1 year ago: (Circle One)
   1 – Better 2 – Same 3 – Worse

2. Current Medical Conditions: (✓) if Diagnosed

a.		
b.		
c.		
d.		
e.		
f.		
g.		

Last MD appt. _____ Next MD appt. _____

Last Hospitalization: Admission Date _____

Discharge Date _____

# of Hospitalizations in past year _____

3. Current Medical Treatments/Therapies:
   (by self or others)

a. _____

b. _____

c. _____

d. _____

NARRATIVE: _____

4. Current Medications:

	DATE	NAME	DOSAGE/FREQUENCY	PURPOSE	DOCTOR	PHARMACY
a.						
b.						
c.						
d.						
e.						
f.						
g.						
h.						
i.						
j.						

Client Name _____

ID # _____

SECTION A: PHYSICAL HEALTH (cont)

5. Sensory/Communications:
(Check appropriate rating with aids if used)

	Good	Fair	Poor	Total Loss	List Aids
Sight					
Hearing					
Speech					

6. Dental problems? Yes No

Foot care problems? Yes No

7. Support Devices:

a. _____

b. _____

c. _____

d. _____

8. Nutrition: (Circle appropriate answer)

Special diet? Yes No

Specify _____

Being followed? Yes No

Appetite _____

Wt. change in past year _____

Daily eating habits:

Meals _____ # Snacks _____

NARRATIVE:

☐ HOME CARE INTERVENTION

SECTION B: COGNITIVE/EMOTIONAL FUNCTIONING

1. Major life changes (crises) in past year.

_____

_____

_____

_____

2. Does client appear oriented to time, place, and person? Yes No

3. Does client appear agitated? Yes No

4. Does client appear depressed? Yes No

NARRATIVE:

☐ HOME CARE INTERVENTION

COGNITIVE/EMOTIONAL MODULE: YES NO

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Client Name _____

ID # _____

SECTION C: ACTIVITIES OF DAILY LIVING

2 or 3 = ADL Impairment

# of ADL Impairments _____

☑ Home Care Intervention	How Does Client Usually: (Circle One)
☐	1. Bathe 0 Completely able 1 Able with aids/difficulty 2 Able with helper 3 Unable
☐	2. Dress/Undress 0 Completely able 1 Able with aids/difficulty 2 Able with helper 3 Unable
☐	3. Eat 0 Completely able 1 Able with aids/difficulty 2 Able with helper 3 Unable
☐	4. Toilet 0 Completely able 1 Able with aids/difficulty 2 Able with helper 3 Unable
☐	5. Continence

Bladder	Bowel
0 Complete control	0
1 Self care devices, no accidents	1
2 Helper, occasional accidents	2
3 Incontinent	3

☐	6. Transfer In/Out Bed/Chair 0 Completely able 1 Able with aids/difficulty 2 Able with helper 3 Unable
☐	7. Get Around Inside 0 Completely able 1 Able with aids/difficulty 2 Able with helper 3 Unable

NARRATIVE:

PERSONAL CARE MODULE: YES NO

Client Name _____

ID # _____

SECTION D: INSTRUMENTAL ACTIVITIES OF DAILY LIVING

1 or 2 = IADL Impairment

# of IADL Impairments _____

NARRATIVE: _____

Σ Home Care Intervention	Describe What Client Can Do. (Circle One)
=	1. Meal Preparation 0 Without help 1 With some help 2 Can't do at all
=	2. Housework 0 Without help 1 With some help 2 Can't do at all
=	3. Laundry 0 Without help 1 With some help 2 Can't do at all
=	4. Shopping 0 Without help 1 With some help 2 Can't do at all
=	5. Taking Medicine 0 Without help 1 With some help 2 Can't do at all
=	6. Get Around Outside 0 Without help 1 With some help 2 Can't do at all
=	7. Transportation 0 Without help 1 With some help 2 Can't do at all
=	8. Money Management 0 Without help 1 With some help 2 Can't do at all
=	9. Use Telephone 0 Without help 1 With some help 2 Can't do at all

HOME DELIVERED MEALS MODULE: YES NO

Client Name _____

ID # _____

SECTION E: INFORMAL SUPPORTS

1. Caregiver (providing daily care)

   Name _____

   Relationship _____

2. Resides: 1 – In Household
   2 – Same Building
   3 – Other

3. Willingness: 1 – High
   2 – Moderate
   3 – Low

4. Expressing stress? Yes No

5. Relief needed by caregiver? Yes No

6. Other Caregivers:

Name	Relationship
a.	
b.	
c.	

NARRATIVE: No Informal Caregivers ☐

☐ HOME CARE INTERVENTION

RESPITE MODULE: YES NO

SECTION F: 24 HOUR SUPERVISION

1. Need for 24 Hour Supervision? Yes No

2. 1 – Long Term
   2 – Short Term

3. Reason(s): 1 – Medical
   2 – ADL/IADL
   3 – Cognitive
   4 – Emotional

NARRATIVE:

SECTION G: SOCIAL PARTICIPATION

1. Daily contact? Yes No

   Type _____
   (telephone, inside, outside, mailman, etc.)

2. List groups, clubs, senior centers, church activities.

3. Satisfied with present level of socialization? Yes No

☐ HOME CARE INTERVENTION

NARRATIVE:

Client Name _____

ID # _____

SECTION H: PHYSICAL ENVIRONMENT

1. Usual living arrangement: (Circle One)

Subsidized:
1 – Housing Authority Development
2 – Other subsidized elderly bldg.
3 – Rent subsidy/private apt.
4 – Congregate
5 – Other _____

Private:
6 – Own home
7 – Private home
8 – Rental house/apt.
9 – Boarding home
10 – Rooming house
11 – Single room occupancy hotel
12 – Other _____

2. Dwelling Unit Only:

Size: # Rooms _____ # Floors _____

3. Safety/Security in Current Housing?

1 – Satisfactory 2 – Unsatisfactory

4. Satisfied with Current Housing?

Yes No

5. Type of Heat _____

☐ HOME CARE INTERVENTION

NARRATIVE:

SECTION I: FINANCIAL RESOURCES

Circle All That Apply:

Present Type of Assistance	Possible Source of Assistance	Client Willing to Pursue
0 – None	0	0
1 – Medicaid	1	1
2 – SSI	2	2
3 – Food Stamps	3	3
4 – Fuel Assistance	4	4
5 – Surplus Commodities	5	5
6 – Housing Subsidy	6	6
7 – Veterans	7	7
8 – Social Security	8	8
9 – Other _____	9	9
10 – Other _____	10	10

☐ HOME CARE INTERVENTION

NARPATIVE:

ALL HOME CARE INTERVENTION ☑ ARE NOTED ON THE PROBLEM LIST

Home Care Corporation - Health Maintenance Organization
Demonstration Project
CNAP Quarterly Reassessment

1. CNAP Quarterly Reassessment 2

2. Client Code ___

3. Reassessment Date ___ ___ ___ ___

4. Home Care Corporation ___

5. FIL ___

Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs)

6. Bathe ___

7. Dress/Undress ___

8. Eat ___

9. Toilet ___

10. Bladder ___

11. Bowel ___

12. Transfer In/Out Bed/Chair ___

13. Get Around Inside ___

14. Meal Preparation ___

15. Housework ___

16. Laundry ___

17. Shopping ___

18. Taking Medicine ___

19. Get Around Outside ___

20. Transportation ___

21. Money Management ___

22. Use Telephone ___

EXHIBIT 3

9/87

Senior Home Care Project

Social and Medical Vulnerability Levels

I) Social Vulnerability

1. Critical ADLs and IADLs: clients are more vulnerable if they are impaired in the areas of transferring, eating, toileting, getting around inside, meal preparation and shopping.

2. Formal and informal supports: lack of support or access only to temporary support indicates higher vulnerability.

II) Medical Vulnerability

1. Diagnoses which could mean a high level of vulnerability depending on the severity and the impact on the client's social situation:

*terminal illness, i.e. Ca, AIDs.
*short term acute exacerbation of disease, i.e. MS, COPD.
*recent surgery.
*fractures, especially a hip fracture.
*Alzheimer's.
*degenerative and neurological conditions, i.e. rheumatoid arthritis, Parkinson's.

2. Symptoms to consider in determining vulnerability:

*frequent falls
*incontinence
*depression or anxiety about diagnosis
*frequent hospital or VNA admissions
*multiple drug use, especially where compliance is a problem
*changing condition, i.e. fluctuating FIL

EXHIBIT 4

Home Care Corporation - Health Maintenance Organization
Demonstration Project
Study Period Utilization Report

1. Utilization Report 3 --STUDY GROUP
2. Client Code 1 0 4 4 (0)
3. Study Entry Date 05-15-86
4. Study Exit Date 11-15-86
5. Reason for Study Exit 6
6. Length of Stay 182
7. Home Care Corporation 1

Service Code	Total Units Authorized Per Full Month	8. Total Units Authorized	9. Total Units Delivered
10. Home Care			
(00 0) Hmkr/PC	3	003	0
(01) Hmkr/PC E/W			
(02 0) Hmkr	9	043	10
(03) Hmkr E/W			
(04) Companion			
(05) Social Day Care			
(06) Meals on Wheels			
(07) Transportation			
(08) Home Health Aide			
(09 0) Chore	03	12	12
(10) Other Home Care			
11. HHA/VNA			
(11)Skld Nrg		008	005
(12) Physical Therapy			
(13) Speech Therapy			
(14) Home Health Aide			
(15) Other/Equipment			
(16) Other/Unit = Hour			
(17) Other/Unit = Visit			

HMO

12. Number of Clinical Visits 04

Institutional Days

13. Acute Hospital Days 00
14. Rehabilitation Days 02
15. Nursing Home Days 02
16. Day Surgery 01

Referral SOURCE: St. V. Hosp. Soc. Wkr.

REASON: disch. following small bowel obstruction

EXHBIT 5

\

Date
Time

Good Morning----------

Hi. My name is Mary Riley and I am working with the Fallon Community Health Plan in an attempt to study the effectiveness of home care programs. Would you please tell me if you have received a letter from them?

We are trying to understand the usefulness of the home care services, how much people rely on these services and to what extent these services are valued.

In order to understand the effectiveness of these services we are conducting a small survey of Fallon Senior Plan Members. There are approximately 20 questions which should take about 30 minutes to complete. The survey is completely voluntary and confidential and while you are under no obligation to participate we would appreciate your input since it may enable us to provide you with better services. Fallon is also considering expanding the Senior Plan benefits to include home care services and your input would be useful in making this decision. I'd like to assure you that your current services will not be affected in any way by this survey.

I'm calling now to ask if you would be willing to participate?

Yes - When would be a good time for you?
Day
Time

No - Thank you for your time and consideration.

SENIOR HOME CARE SURVEY

Before we start I'd like to assure you again that this interview is confidential and completely voluntary. We are trying to understand the usefulness of the home care services, how much people rely on these services, and to what extent these services are valued. By home care services we mean the services provided by Elder Home Care of Worcester Inc. such as chore helper, home health aide, transportation and meal service not the medical services you receive from a doctor or visiting nurse.

If you feel that these services are beneficial Fallon may consider offering a plan to provide these services to all Senior Plan Members. Therefore we need to know whether you are satisfied with the services, how important these services are to you and how you would be willing to pay for these services.

FOR CONTROL GROUP ONLY:

We would also like you to sign a consent form giving us permission to use information from your Elder Home Care file since we may need this for the survey. Would you be willing to give me access to these records? Please sign here.

First we are interested in finding out to what extent you rely on the home care services, what started your need for the services and what other ways you may have to get help besides the use of these services. By home care services we mean those services provided by Elder Home Care Inc. such as homemaker services, chore services, transportation services, or meal services. We do not mean the regular medical services you receive from a doctor or nurse.

1). Would you please tell me what started your need for the home care services?

If necessary;
2). Have you had a stay in the hospital in the last 5 years?

3). Have you had a stay in a nursing home in the last 5 years?

4). How was that/ were those paid for?

IF PAID SOME PORTION PERSONALLY:
5). How did you feel about what you had to pay?

6). Have you considered any other ways besides the home care services to help you with your daily/ home needs?

a. What else did you consider doing?

b. Why did you chose the home care services over your other ways?

7). Would you please tell whether anyone helps you

with your care on a daily basis
with your finances
pay your home care service costs

Now I'd like to ask you some questions about the services you receive and how satisfied you are with those services.

8). How long have you been using the home care services?

9). Did you get the services you wanted?

4	3	2	1
no definitely not	no, not really	yes, generally	yes def.

10). Do you feel you are receiving the right amount of services from each of the following; Please tell me whether you think you are receiving too much, the right amount, or not enough of each of the following services. (Note ask only of the services that they are receiving)

	too much	right amount	not enough
case manager services			
personal care services			
homemaker services			
companion services			
chore services			
home health aide services			
transportation services			
social day care services			
meal services			
other			

11). How would you rate the quality of each of the following home care services you received. Would you say that the quality of each of the following services was excellent good, fair or poor?

	excellent	good	fair	poor
Case Manager Services				
Personal Care Services				
Homemaker Services				
Companion Services				
Chore Services				
Home Health Aide Services				
Meal Services				
Transportation Services				
Social Day Care Services				
Other				

12). In general, how satisfied are you with the amount of help you received? Would you say that you are very satisfied, mostly satisfied, indifferent or mildly dissatisfied, or quite dissatisfied with the services you have received?

4	3	2	1
quite dissatisfied	indifferent or mildly dissatisfied	mostly satisfied	very satisfied

13). In an overall, general sense, how satisfied are you with the services you received? Would you say that you are

4	3	2	1
very satisfied	mostly satisfied	indifferent or mildly dissatisfied	quite dissatisfied

14). Would you tell me how much longer you expect to use the home care services? _____
(interviewer to code)

a). less than 6 months
b). 6 months to 1 year
c). several years
d). rest of my life
e). can't predict

HAND CARD

15). Now please tell me how important each of the following services have been in your ability to remain in your own home. Would you say each of these services has been very important, somewhat important or not important in your ability to remain in your own home?

SERVICE	VERY IMP.	SOMEWHAT	NOT IMP.	WILLING PAY	COST
Homemaker Service					
Personal Care Service					
Companion Service					
Chore Service					
Home Health Aide Serv.					
Meal Service					
Transportation Service					
Social Day Care Serv.					
Other					

15a. Which 3 services would you consider to be most important?

15b. Would you tell me what you think these services actually cost per visit per hour?(Fill in on graph)

One indication of the value of these services is your willingness to pay for the services. Many of these services are quite expensive. For example one visit with a(pick one of the 3 most important services they are using)---------- usually costs about $------. While your current services will not be affected by your replies we would like to know

15c. If your current payment plan for the home care services were to end for any reason what would you be willing to pay for these services per visit?(Fill in on graph)

There are a number of different ways to pay for the home care services.

16). You are currently paying $20.00/ per month premium for your Fallon Senior Plan Insurance. This does not include your home care services such as .....(indicate a service they are currently using). How much more would you be willing to pay per month if those services (you are receiving now) were included as part of you Senior Plan benefits? Would you be willing or not to pay an extra

a). 5
b). 10
c). 15
d) 20
e) 25
f) other
g) not willing to pay more

17). If you had to pay the services out right(not as part of a insurance plan) what do you think you would be able to spend each month for these services.

18). Given that you live on a fixed income what are the 4 most important things on which you spend your money?

1.----------
2.----------
3.----------
4.----------

There are a number of different ways to pay for the home care services.If Fallon were to offer a plan covering home care services they would like to know which payment plan would be most preferable to you?

19). Would you please tell me whether you would prefer to pay a higher monthly Insurance premium to include coverage of all home care service costs, your current premium and pay an additional fee for the home care services when you need them or would you prefer to pay a lump sum entrance fee to cover all home care services for as long as you need them?

A). higher premium(examples)
B). current premium & addtl fee(examples·
C). lump sum(examples)
D). cannot determine
E). not important

20). We are interested in knowing whether the home care services have been important or not in your ability to stay at home. As a final question would you please tell me how important the home care services have been to you.
(INTERVIEWER TO CODE - USE LIST AS GUIDE)

a. it would be impossible for me to manage without the home care services
b. I would have to go to a nursing home if the home care services were not available to me.
c. I would have to rely on family members to help me out.
d. I would have to rely on others to help me out.
e. I could manage by myself but it would be difficult
f. It makes my life easier but I could manage without them
g. other
h. cannot say

IF APPLICABLE;
Earlier you told me that someone assits you with your daily home care or finances/ Would you mind if we contacted that person to see how they feel about the home care services?

Name
Phone #

Thank you very much for your time and cooperation. We greatly appreciate it!!!

EXHIBIT 6

A STUDY OF THE SENIOR HOME CARE PROJECT

NAME_____TEL. NO._____

POSITION _____

ORGANIZATION _____

Please note: Questions that include terms such as "work", "job", "major tasks" refer only to activities related to the Senior Home Care Project. You are not asked to discuss or rate your duties as they relate to other responsibilities.

If you have any questions, please do not hesitate to contact:

Rosalie S. Wolf
University Center on Aging
University of Massachusetts Medical Center
55 Lake Avenue North
Worcester, MA 01655
Tel. (617) 856-3662

THANK YOU

A STUDY OF THE SENIOR HOME CARE PROJECT

THE NATURE OF YOUR WORK AND JOB

We would like to know the specific kinds of tasks and work activities that make up your job as it relates to the Senior Home Care Project. Please describe below the types of tasks or work activities you have been performing regularly during the past three months. Briefly explain what each task is and indicate the numbers of hours each week you spend doing it.

Task 1: _____hours/week

Task 2: _____hours/week

Task 3: _____hours/week

Task 4: _____hours/week

Task 5: _____hours/week

Task 6: _____hours/week

Task 7: _____hours/week

Task 8: _____hours/week

_____

_____

_____

_____

1. Indicate the total number of hours per week you normally worked on the Senior Home Care Project. Hours/week during the past three months: _____.

2. When you began this job, how long a period of orientation and training did you receive that was directly related to your job?

A FEW HOURS OR LESS	ABOUT A DAY	ABOUT A WEEK	ABOUT A MONTH	MORE THAN A MONTH
1	2	3	4	5

3. How many years of academic, vocational, or professional education have you obtained beyond high school?

YEARS AFTER HIGH SCHOOL									
0	1	2	3	4	5	6	7	8	9

4. What is the highest educational degree you obtained in school?

GRADE SCHOOL DIPLOMA	HIGH SCHOOL DIPLOMA	VOCATIONAL OR CRAFT CERTIFICATION	COLLEGE BACHELOR'S DEGREE	MASTER'S DEGREE	DOCTORAL DEGREE
1	2	3	4	5	6

5. Indicate the specific major or field of specialization in which you obtained this degree.

_____

6. How often do you follow about the same work methods or steps for doing your major tasks from day to day?

VERY SELDOM	SOMETIMES	ABOUT HALF THE TIME	QUITE OFTEN	VERY OFTEN
1	2	3	4	5

7. To what extent did you follow standard operating procedures or practices to do your major tasks the past 3 months?

TO NO EXTENT	LITTLE EXTENT	SOME EXTENT	GREAT EXTENT	VERY GREAT EXTENT
1	2	3	4	5

8. How many written rules and procedures exist for doing your major task?

VERY FEW IF ANY	A SMALL NUMBER	A MODERATE NUMBER	A LARGE NUMBER	A GREAT NUMBER
1	2	3	4	5

9. How precisely do these rules and procedures specify how your major tasks are to be done?

VERY GENERAL	MOSTLY GENERAL	SOMEWHAT SPECIFIC	QUITE SPECIFIC	VERY SPECIFIC
1	2	3	4	5

10. How heavy was your work load during the past 3 months?

OFTEN NOT ENOUGH TO KEEP ME BUSY	SOMETIMES NOT ENOUGH TO KEEP ME BUSY	JUST ABOUT THE RIGHT AMOUNT	HARD TO KEEP UP WITH	ENTIRELY TOO MUCH FOR ME TO HANDLE
1	2	3	4	5

11. How far in advance do you generally know how much work will be required of you?

ABOUT AN HOUR OR LESS IN ADVANCE	ABOUT A DAY IN ADVANCE	ABOUT A WEEK IN ADVANCE	ABOUT A MONTH IN ADVANCE	ABOUT 6 MONTHS OR MORE IN ADVANCE
1	2	3	4	5

12. During the past 3 months, how much control did you have in setting the pace of your work?

NONE	VERY LITTLE	SOME	QUITE A BIT	VERY MUCH
1	2	3	4	5

YOUR FEELINGS ABOUT YOUR JOB

Now we would like to ask you some questions about how you personally feel about your job.

13. Each of the statements below is something that a person might say about his or her job. Please indicate yur own, personal feelings about your job by circling a number on the scale to the right of each statement to indicate how much you agree or disagree with each statement.

	DISAGREE STRONGLY	DISAGREE SOMEWHAT	NEUTRAL	AGREE-SOME-WHAT	AGREE STRONGLY
a. It's hard on this job, for me to care very much about whether or nor the work gets done rights.	1	2	3	4	5
b. My opinion of myself goes up when I do this job well.	1	2	3	4	5
c. My supervisor often lets me know how well I am performing my job.	1	2	3	4	5

		DISAGREE STRONGLY	DISAGREE SOMEWHAT	NEUTRAL	AGREE-SOME-WHAT	AGREE STRONGLY
d.	I feel a great sense of accomplishment when I do this job well.	1	2	3	4	5
e.	I feel a very high degree of <u>personal responsiblity for the work I do on this job.</u>	1	2	3	4	5
f.	I frequently think of quitting this job.	1	2	3	4	5
g.	I feel bad and unhappy when I discover that I have performed poorly on this job.	1	2	3	4	5
h.	My co-workers on this job almost <u>never</u> give me any "feedback" about how well I am doing on my work.	1	2	3	4	5
i.	I feel I should personally take the credit or the blame for the results of my work on this job.	1	2	3	4	5
j.	My own feelings generally are <u>not</u> affected much one way or the other by how well I do on this job.	1	2	3	4	5
k.	I am recognized and rewarded for putting in additional effort to do superior work in this job.	1	2	3	4	5
l.	I am reprimanded or told to "shape up" when I do inferior work in this job.	1	2	3	4	5

14. During the past 3 months, to what extent di you experience problems in coordinating activities:	TO NO EXTENT	LITTLE EXTENT	SOME EXTENT	LARGE EXTENT	VERY GREAT EXTENT
a. Between you and unit members?	1	2	3	4	5
b. With people outside of your unit?	1	2	3	4	5

A SELF-APPRAISAL OF YOUR UNIT

Now make a self-assessment of the organization and effectiveness of your unit.

A. Describe the major strengths of your work unit.

B. Describe the major weaknesses of your work unit.

C. Describe the specific organizational changes you think are necessary to improve the effectiveness of your unit.

D. How long have you worked in this organization?

DAILY/WEEKLY REPORT
(hours)

Worker_____ Day's Date_____

Week Ending_____

CLIENT-RELATED SERVICES

CLIENT	ID #	SCREENING/ REFERRAL	ASSESSMENT/ HOME VISIT	TELEPHONE/ CONTACT	AGENCY CONTACT BETWEEN MEETINGS	CONSULTATION WITH SUPERVISOR	CLINICAL TEAM REASSESSMENT	CASE RECORDING/ CORRESPONDENCE	OTHER:	TRAVEL	HOURS	MINUTES
TOTAL												

NON-CLIENT RELATED SERVICES	HRS.	MIN.
CASE FINDING/IDENTIFCA.		
TRAINING/EDUCATION		
PROVIDING		
RECEIVING		
AGENCY RELATIONS		
STAFF MEETINGS		
PROJECT ADMINISTRATION		
TRAVEL		
OTHER		
TOTAL NON-CLIENT		
TOTAL CLIENT		
GRAND TOTAL		

EXHIBIT 7